WEST

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Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers

Search Results -

Term	Documents
GCSF	169
GCSFS	1
RECEPTOR	70543
RECEPTORS	37269
(GCSF ADJ RECEPTOR) AND 1	1

Database: All Databases (USPT + EPAB + JPAB + DWPI + TDBD)

Refine Search: `l1 and gcsf receptor`

Search History

DB Name	Query	Hit Count	Set Name
ALL	l1 and gcsf receptor	1	L2
ALL	1l-3 or il3 or 1l-7 or il7 or erythropoietin receptor or gcsf receptor or gcsf receptor	495	L1

WEST

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Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers

Search Results - Record(s) 1 through 1 of 1 returned.

1. Document ID: ES 2134771 T3, WO 9114776 A, AU 9174968 A, JP 03505860 X, EP 521156 A1, EP 521156 A4, US 5574136 A, EP 521156 B1, DE 69131421 E

Entry 1 of 1 File: DWPI Oct 16, 1999

DERWENT-ACC-NO: 1991-310576
DERWENT-WEEK: 199950

TITLE: DNA encoding granulocyte colony stimulating factor receptor - for recombinant prodn. of GCSF receptor useful in therapy and research

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Image

Term	Documents
GCSF	169
GCSFS	1
RECEPTOR	70543
RECEPTORS	37269
(GCSF ADJ RECEPTOR) AND 1	1

Display 20 Documents including document number 1

Display Format: TI Change Format

Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers

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Document Number 1

Entry 1 of 1 File: DWPI Oct 16, 1999

DERWENT-ACC-NO: 1991-310576
DERWENT-WEEK: 199950

TITLE: DNA encoding granulocyte colony stimulating factor receptor - for recombinant prodn. of GCSF receptor useful in therapy and research

INVENTOR: FUKUNAGA, R; NAGATA, S

PATENT-ASSIGNEE: OSAKA BIOSCIENCE INST[OSABN], OSAKA BIOSCIENCE INST[OSABN]

PRIORITY-DATA:

APPL-NO	APPL-DATE
1990JP-0176629	July 3, 1990
1990JP-0074539	March 23, 1990

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
ES 2134771 T3	October 16, 1999	N/A	000	C07K014/00
WO 9114776 A	October 3, 1991	N/A	099	N/A
AU 9174968 A	October 21, 1991	N/A	000	N/A
JP 03505860 X	May 7, 1992	N/A	099	C12N015/12
EP 521156 A1	January 7, 1993	E	037	C12N015/12
EP 521156 A4	February 17, 1993	N/A	000	N/A
US 5574136 A	November 12, 1996	N/A	053	C12N015/12
EP 521156 B1	July 7, 1999	E	000	C07K014/00
DE 69131421 E	August 12, 1999	N/A	000	C07K014/00

DESIGNATED-STATES: AU BB BG BR CA FI HU JP KR LK MC MR MW NO PL RO SD SU US AT BE CH DE DK ES FR GB GR IT LU NL

OA SE AT BE CH DE DK ES FR GB GR IT LI LU NL SE AT BE CH DE DK ES FR GB GR IT LI LU NL SE

CITED-DOCUMENTS:3.Jnl.Ref; 2.Jnl.Ref ; WO 9105046

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	APPL-DESCRIPTOR
ES 2134771T3	March 22, 1991	1991EP-0905894	N/A
ES 2134771T3	N/A	EP 521156	Based on
JP 03505860X	March 22, 1991	1991JP-0505860	N/A
JP 03505860X	March 22, 1991	1991WO-JP00375	N/A
JP 03505860X	N/A	WO 9114776	Based on
EP 521156A1	March 22, 1991	1991EP-0905894	N/A
EP 521156A1	March 22, 1991	1991WO-JP00375	N/A
EP 521156A1	N/A	WO 9114776	Based on
EP 521156A4	N/A	1991EP-0905894	N/A
US 5574136A	March 22, 1991	1991WO-JP00375	N/A
US 5574136A	September 22, 1992	1992US-0923976	N/A
US 5574136A	N/A	WO 9114776	Based on
EP 521156B1	March 22, 1991	1991EP-0905894	N/A
EP 521156B1	March 22, 1991	1991WO-JP00375	N/A
EP 521156B1	N/A	WO 9114776	Based on
DE 69131421E	March 22, 1991	1991DE-0631421	N/A
DE 69131421E	March 22, 1991	1991EP-0905894	N/A
DE 69131421E	March 22, 1991	1991WO-JP00375	N/A
DE 69131421E	N/A	EP 521156	Based on
DE 69131421E	N/A	WO 9114776	Based on

INT-CL (IPC): C07K 13/00; C07K 14/00; C07K 14/705; C07K 14/715; C12N 5/10; C12N 15/12 ; C12P 21/02; C12R 1/91; C12P 21/02; C12R 1/19; C12P 21/02; C12R 1/19; C12P 21/02; C12R 1/91

ABSTRACTED-PUB-NO: EP 521156B
BASIC-ABSTRACT:

The DNA sequence coding for granulocyte colony stimulating factor (GCSF) receptor is new. The sequence is pref. mouse of human in origin. The sequence may code

for all or part of the GCSF receptor amino acid sequence. The 2513-base DNA sequence and a 749 amino acid sequence that it codes are specifically claimed, as well as a vector and a transformant containing the DNA sequence and a method of producing the GCSF.

USE/ADVANTAGE - The murine DNA sequence is used as a probe to obtain human GCSF receptor sequence. By hybridisation with human histiocytic lymphoma, human acute myclogenous leukaemia, human promyelocyte leukaemia and human amnion of cell lines ATCG CRL 1593, CCL246, CCL240 and CCL62, the sequence can be produced for chemical use, study and research.

ABSTRACTED-PUB-NO: US 5574136A
EQUIVALENT-ABSTRACTS:

The DNA sequence coding for ganulocyte colony stimulating factor (GCSF) receptor is new. The sequence is pref. mouse of human in origin. The sequence may code for all or part of the GCSF receptor amino acid sequence. The 2513-base DNA sequence and a 749 amino acid sequence that it codes are specifically claimed, as well as a vector and a transformant containing the DNA sequence and a method of producing the GCSF.

USE/ADVANTAGE - The murine DNA sequence is used as a probe to obtain human GCSF receptor sequence. By hybridisation with human histiocytic lymphoma, human acute myclogenous leukaemia, human promyelocyte leukaemia and human amnion of cell lines ATCG CRL 1593, CCL246, CCL240 and CCL62, the sequence can be produced for chemical use, study and research.

An isolated DNA encoding murine G-CSF receptor which encodes the 837 residue amino acid sequence given in the specification, is new.

WO 9114776A

CHOSEN-DRAWING: Dwg.0/14 Dwg.0/21

DERWENT-CLASS: B04 D16
CPI-CODES: B04-B04A1; B04-B04A3; B04-B04H; B11-C07B5; B12-K04A; D05-C12; D05-H12;

Main Menu | Search Form | Result Set | Show S Numbers | Edit S Numbers
First Hit | Previous Document | Next Document
Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC
Help | Logout

Search Results - Record(s) 1 through 14 of 14 returned.

1. Document ID: US 6028176 A
Entry 1 of 14 File: USPT Feb 22, 2000

US-PAT-NO: 6028176
DOCUMENT-IDENTIFIER: US 6028176 A
TITLE: High-affinity interleukin-4 muteins

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Image

2. Document ID: US 5998598 A
Entry 2 of 14 File: USPT Dec 7, 1999

US-PAT-NO: 5998598
DOCUMENT-IDENTIFIER: US 5998598 A
TITLE: Immunoadhesins and methods of production and use thereof

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Image

3. Document ID: US 5986059 A
Entry 3 of 14 File: USPT Nov 16, 1999

US-PAT-NO: 5986059
DOCUMENT-IDENTIFIER: US 5986059 A
TITLE: T-cell selective interleukin-4 agonists

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Image

4. Document ID: US 5919456 A
Entry 4 of 14 File: USPT Jul 6, 1999

US-PAT-NO: 5919456
DOCUMENT-IDENTIFIER: US 5919456 A
TITLE: IL-13 receptor specific chimeric proteins

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Image

5. Document ID: US 5866760 A

Entry 5 of 14 File: USPT Feb 2, 1999

US-PAT-NO: 5866760
DOCUMENT-IDENTIFIER: US 5866760 A
TITLE: Stat6 deficient transgenic mice

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Image

6. Document ID: US 5858701 A
Entry 6 of 14 File: USPT Jan 12, 1999

US-PAT-NO: 5858701
DOCUMENT-IDENTIFIER: US 5858701 A
TITLE: DNA encoding an insulin receptor substrate

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Image

7. Document ID: US 5830453 A
Entry 7 of 14 File: USPT Nov 3, 1998

US-PAT-NO: 5830453
DOCUMENT-IDENTIFIER: US 5830453 A
TITLE: Use of IL-13 to induce 15-lipoxygenase

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Image

8. Document ID: US 5814517 A
Entry 8 of 14 File: USPT Sep 29, 1998

US-PAT-NO: 5814517
DOCUMENT-IDENTIFIER: US 5814517 A
TITLE: DNA spacer regulatory elements responsive to cytokines and methods for their use

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Image

9. Document ID: US 5712094 A
Entry 9 of 14 File: USPT Jan 27, 1998

US-PAT-NO: 5712094
DOCUMENT-IDENTIFIER: US 5712094 A
TITLE: Methods for detecting modulators of cytokine action

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Image

10. Document ID: US 5710023 A
Entry 10 of 14 File: USPT Jan 20, 1998

US-PAT-NO: 5710023
DOCUMENT-IDENTIFIER: US 5710023 A
TITLE: IL-13 cytokine receptor chain

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Image

11. Document ID: US 5614191 A
Entry 11 of 14 File: USPT Mar 25, 1997

US-PAT-NO: 5614191
DOCUMENT-IDENTIFIER: US 5614191 A
TITLE: IL-13 receptor specific chimeric proteins and uses thereof

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Image

12. Document ID: US 5596072 A
Entry 12 of 14 File: USPT Jan 21, 1997

US-PAT-NO: 5596072
DOCUMENT-IDENTIFIER: US 5596072 A
TITLE: Method of refolding human IL-13

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Image

13. Document ID: AU 9741640 A, WO 9808957 A1
Entry 13 of 14 File: DWPI Mar 19, 1998

DERWENT-ACC-NO: 1998-179442
DERWENT-WEEK: 199831
COPYRIGHT 2000 DERWENT INFORMATION LTD
TITLE: Chimeric molecules which bind to an interleukin-13 receptor - with blocker of interleukin-4 receptor, for delivery of effector molecules to tumours bearing IL-13 receptor

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Image

14. Document ID: JP 11511028 W, WO 9720926 A1, FR 2742156 A1, AU 9675760 A, ZA 9610238 A, NO 9802550 A, EP 876482 A1, BR 9611697 A
Entry 14 of 14 File: DWPI Sep 28, 1999

DERWENT-ACC-NO: 1997-319773
DERWENT-WEEK: 199952
COPYRIGHT 2000 DERWENT INFORMATION LTD
TITLE: New purified human interleukin-13 receptors - and related nucleic acids, useful for diagnosis and treatment of inflammation, allergy, etc

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Image

Term	Documents
IL-4	1637
IL-4S	10
RECEPTOR	70543
RECEPTORS	37269
IL4	323
IL4S	1
1 AND ((IL4 ADJ RECEPTOR) OR (IL-4 ADJ RECEPTOR))	14

Display 20 Documents including document number 14

Display Format: TI Change Format

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Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers

Search Results -

Term	Documents
IL-4	1637
IL-4S	10
RECEPTOR	70543
RECEPTORS	37269
IL4	323
IL4S	1
1 AND ((IL4 ADJ RECEPTOR) OR (IL-4 ADJ RECEPTOR))	14

Database: All Databases (USPT + EPAB + JPAB + DWPI + TDBD)

Refine Search: `l1 and (il-4 receptor or il4 receptor)`

Search History

DB Name	Query	Hit Count	Set Name
ALL	l1 and (il-4 receptor or il4 receptor)	14	L3
ALL	l1 and il-4 receptor or il4 receptor	34	L2
ALL	il-13 receptor or il13 receptor	23	L1

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**********STN Columbus **********
**

FILE 'MEDLINE'
FILE 'JAPIO'
FILE 'BIOSIS'
FILE 'SCISEARCH'
FILE 'CAPLUS'
FILE 'EMBASE'
=> s haemopoietin receptor#

L1      19 HAEMOPOIETIN RECEPTOR#

=> s gcsf receptor# or g-csf receptor#

L2      1350 GCSF RECEPTOR# OR G-CSF RECEPTOR#

=> s il-13 receptor# or il13 receptor#

L3      357 IL-13 RECEPTOR# OR IL13 RECEPTOR#

=> dup rem l3

PROCESSING COMPLETED FOR L3
L4      108 DUP REM L3 (249 DUPLICATES REMOVED)

=> s l4 and (il4 or il-4)

L5      82 L4 AND (IL4 OR IL-4)

=> d l5 ibib abs 1-82


L5  ANSWER 1 OF 82  MEDLINE
ACCESSION NUMBER:  2000166405    MEDLINE
DOCUMENT NUMBER:  20166405
TITLE:          Interleukin-4 and interleukin-13 act on glomerular visceral
                epithelial cells.
AUTHOR:         Van Den Berg J G; Aten J; Chand M A; Claessen N; Dijkink L;
                Wijdenes J; Lakkis F G; Weening J J
CORPORATE SOURCE:  Department of Pathology, Academic Medical Center,
                University of Amsterdam, The Netherlands..
                j.g.vandenberg@amc.uva.nl
SOURCE:         JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY, (2000 Mar)
                11 (3) 413-22.
                Journal code: A6H. ISSN: 1046-6673.
PUB. COUNTRY:   United States
                Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:       English
FILE SEGMENT:   Priority Journals
ENTRY MONTH:    200005
ENTRY WEEK:     20000504
AB  In minimal change nephrosis (MCN), proteinuria is associated with
    structural changes of the glomerular visceral epithelial cells (GVEC). The
    occurrence of MCN has been associated with 2 lymphocyte-dependent
    conditions. To examine a direct role for type 2 cytokines in GVEC injury,
    the expression of interleukin ( ***IL*** )- ***4*** / ***IL*** -
    ***13***  ***receptors***  by GVEC and direct effects of ***IL*** -
    ***4*** and IL-13 on GVEC were studied. Reverse transcription-PCR showed
    that isolated human and rat glomeruli and cultured human and rat GVEC
    expressed mRNA for IL-4Ralpha, IL-13Ralpha1, and IL-13Ralpha2. Protein
    expression of IL-4Ralpha and IL-13Ralpha2 by GVEC in human kidney biopsies
    and by cultured human GVEC was detected by immunohistochemistry. Western
    blotting demonstrated phosphorylation of STAT6 in cultured GVEC upon
    incubation with ***IL*** - ***4*** or IL-13. This indicated signal
    transduction via the heterodimeric receptor complex IL-4R2, which is
    composed of the IL-4Ralpha and the IL-13Ralpha1. Direct effects on GVEC
    function were examined in monolayer experiments. ***IL*** - ***4***
    and IL-13 dose-dependently decreased transepithelial electrical resistance
    of monolayers of rat GVEC to approximately 30 and 40% of baseline values,
    respectively. The transepithelial electrical resistance decrease was
    associated with a significant increase in short-circuit current, whereas
    no changes were observed in the transmonolayer flux of the macromolecules
    horseradish peroxidase (molecular weight, 44 kD) and 14C-mannitol
    (molecular weight, 182 Da). No changes in cell structure were observed
    with electron microscopy. It is concluded that by binding to specific
    ***IL*** - ***4*** / ***IL*** - ***13*** ***receptors*** ,
    ***IL*** - ***4*** and IL-13 can exert specific effects on GVEC
    function, which could be of pathogenetic relevance for glomerular injury
    in MCN.

L5  ANSWER 2 OF 82  MEDLINE
ACCESSION NUMBER:  2000106191    MEDLINE
DOCUMENT NUMBER:  20106191
TITLE:          Sharing of receptor subunits and signal transduction
                pathway between the ***IL*** - ***4*** and ***IL***
                - ***13***  ***receptor*** system.
AUTHOR:         Murata T; Taguchi J; Puri R K; Mohri H
CORPORATE SOURCE:  First Department of Internal Medicine, School of Medicine,
                Yokohama City University, Japan.
SOURCE:         INTERNATIONAL JOURNAL OF HEMATOLOGY, (1999 Jan) 69 (1)
                13-20. Ref: 56
                Journal code: A7F. ISSN: 0925-5710.
PUB. COUNTRY:   Ireland
                Journal; Article; (JOURNAL ARTICLE)
                General Review; (REVIEW)
                (REVIEW, TUTORIAL)
LANGUAGE:       English
ENTRY MONTH:    200004
ENTRY WEEK:     20000403
AB  In this review, we summarize the subunit structure of the interleukin (
    ***IL*** )- ***4*** and ***IL*** - ***13*** ***receptor***
    system and the molecular mechanism of signals through the cytokine
    receptor systems. We have demonstrated that two different forms of IL-4R
    exist, classical and alternative. Classical IL-4R is predominantly
    expressed in hematopoietic cells and consists of IL-4R p140 (beta) and
    IL-2R gamma (gamma c) chains. The alternative form of IL-4R is
    predominantly expressed in nonhematopoietic cells and consists of IL-4R
    beta and IL-13R alpha' chains. Moreover, the alternative form of IL-4R is
    also used as a functional component in the IL-13R complex. For signal
    transduction through IL-4R and IL-13R, we have demonstrated that in
    nonhematopoietic cells, Janus protein tyrosine kinase (JAK) 2 is
    phosphorylated and activated instead of JAK3 tyrosine kinase. While JAK3
    is required for signal transducer and activator of transcription-6 (STAT6)
    activation in hematopoietic cells, we recently demonstrated that in
    nonhematopoietic cells JAK2 is required for STAT6 activation for the
    alternative form of IL-4R. Thus, a major difference exists between
    hematopoietic and nonhematopoietic cells with regard to structure and
    signal transduction through the IL-4R and IL-13R systems.

L5  ANSWER 3 OF 82  MEDLINE
ACCESSION NUMBER:  2000079111    MEDLINE
DOCUMENT NUMBER:  20079111
TITLE:          Binding of ***IL*** - ***4*** to the
                IL-13Ralpha(1)/IL-4Ralpha receptor complex leads to STAT3
                phosphorylation but not to its nuclear translocation.
AUTHOR:         Wery-Zennaro S; Letourneur M; David M; Bertoglio J; Pierre
                J
CORPORATE SOURCE:  INSERM U461, Faculte de Pharmacie, 5, rue J.B. Clement,
                92296, Chatenay-Malabry, France.
SOURCE:         FEBS LETTERS, (1999 Dec 24) 464 (1-2) 91-6.
                Journal code: EUH. ISSN: 0014-5793.
PUB. COUNTRY:   Netherlands
                Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:       English
FILE SEGMENT:   Priority Journals; Cancer Journals
ENTRY MONTH:    200003
ENTRY WEEK:     20000305
AB  Interleukin-4 ( ***IL*** - ***4*** ) is a pleiotropic cytokine, which
    acts on both hematopoietic and non-hematopoietic cells, through different
    types of receptor complexes. In this study, we report that in human B
    cells, ***IL*** - ***4*** caused rapid phosphorylation of Janus
    kinase (JAK) 1 and JAK3 tyrosine kinases. In keratinocytes, the
    hematopoietic-specific receptor common gamma(c) chain is not expressed and
    the ***IL*** - ***13***  ***receptor*** alpha(1) (IL-13Ralpha(1))
    participates in ***IL*** - ***4*** signal transduction. In
    keratinocytes, ***IL*** - ***4*** induced JAK1 and JAK2
    phosphorylation but, unlike in immune cells, ***IL*** - ***4*** did
    not involve JAK3 activation for its signaling. In both cell types,
    ***IL*** - ***4*** induced phosphorylation and DNA binding activation
    of the signal transducer and activator of transcription (STAT) 6 protein.
    Furthermore, ***IL*** - ***4*** stimulation of keratinocytes also
    induced tyrosine phosphorylation of STAT3 which was found to bind to the
    phosphorylated IL-13Ralpha(1). STAT3 however did not significantly
    translocate to the nucleus, nor did it bind with high affinity to target
    DNA sequences.

L5  ANSWER 4 OF 82  MEDLINE
ACCESSION NUMBER:  2000001678    MEDLINE
DOCUMENT NUMBER:  20001678
TITLE:          Differential responses of human monocytes and macrophages
                to ***IL*** - ***4*** and IL-13.
AUTHOR:         Hart P H; Bonder C S; Balogh J; Dickensheets H L; Donnelly
                R P; Finlay-Jones J J
CORPORATE SOURCE:  Department of Microbiology & Infectious Diseases, School of
                Medicine, Flinders University of South Australia, Adelaide,
                Australia.
SOURCE:         JOURNAL OF LEUKOCYTE BIOLOGY, (1999 Oct) 66 (4) 575-8.
                Ref: 39
                Journal code: IWY. ISSN: 0741-5400.
PUB. COUNTRY:   United States
                Journal; Article; (JOURNAL ARTICLE)
                General Review; (REVIEW)
                (REVIEW, TUTORIAL)
LANGUAGE:       English
FILE SEGMENT:   Priority Journals; Cancer Journals
ENTRY MONTH:    200001
ENTRY WEEK:     20000104
AB  The primary interleukin-4 ( ***IL*** - ***4*** ) receptor complex on
    monocytes (type I ***IL*** - ***4*** receptor) includes the 140-kDa
    alpha chain (IL-4R alpha) and the IL-2 receptor gamma chain, gamma(c),
    which heterodimerize for intracellular signaling, resulting in suppression
    of lipopolysaccharide (LPS)-inducible inflammatory mediator production.
    The activity of IL-13 on human monocytes is very similar to that of
    ***IL*** - ***4*** because the predominant signaling chain (IL-4R
    alpha) is common to both receptors. In fact, IL-4R alpha with IL-13R
    alpha1 is designated both as an ***IL*** - ***13*** ***receptor***
    and the type II ***IL*** - ***4*** receptor. When the
    anti-inflammatory activities of ***IL*** - ***4*** and IL-13 were
    investigated on synovial fluid macrophages and compared with the responses
    by monocytes isolated from the patients at the same time as joint
    drainage, the response profiles differed with some responses similar in
    the two cell populations, others reduced on the inflammatory cells.
    Similar differences were recorded in the response profiles to ***IL***
    - ***4*** and IL-13 by monocytes and monocytes cultured for 7 days in
    macrophage colony-stimulating factor (M-CSF) or granulocyte-macrophage CSF
    (GM-CSF) (monocyte-derived macrophages, MDMac). MDMac have reduced
    gamma(c) mRNA levels and reduced expression of the functional 64-kDa
    gamma(c). There was a similar loss of IL-13R alpha1 mRNA on monocyte
```

differentiation. In turn, there was a significant reduction in the ability
of ***IL*** - ***4*** and IL-13 to activate STAT6. These findings
suggest that different functional responses to ***IL*** - ***4***
and IL-13 by human monocytes and macrophages may result from reduced
expression of gamma(c) and IL-13R alpha1.

L5 ANSWER 5 OF 82 MEDLINE
ACCESSION NUMBER: 1999445551 MEDLINE
DOCUMENT NUMBER: 99445551
TITLE: Mutants of interleukin 13 with altered reactivity toward
interleukin 13 receptors.
AUTHOR: Thompson J P; Debinski W
CORPORATE SOURCE: Section of Neurosurgery/H110, Department of Surgery,
Pennsylvania State University College of Medicine, Hershey,
Pennsylvania 17033-0850, USA.
CONTRACT NUMBER: CA 74145 (NCI)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1999 Oct 15) 274 (42)
29944-50.
Journal code: HIV. ISSN: 0021-9258.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 200001
ENTRY WEEK: 20000104
AB Interleukin 13 (IL13) belongs to a family of cytokines whose members
exhibit structural homology, despite amino acid sequence dissimilarity.
For example, while of limited sequence homology, IL13 and ***IL4***
share a signaling receptor, IL13/4 receptor, on a variety of human normal
cells. However, a subclass of ***IL4*** -independent ***IL13***
receptors is overexpressed on certain transformed cells, including
human malignant gliomas. We introduced mutations into human (h) IL13 to
determine the site(s) involved in interaction with the shared receptor
and/or the glioma-associated receptor. This analysis identified at least
three protein regions that are needed for signaling through the shared
receptor. These regions were localized to alpha-helices A, C, and D and
were mainly separate from the region(s) needed to interact with the
glioma-associated receptor. Glutamic acids at positions 13 and 16 in hIL13
alpha-helix A, arginine and serine at positions 66 and 69 in helix C, and
arginine at position 109 in helix D were found to be important in inducing
biological signaling since their specific mutation resulted in loss and/or
gain of function phenomena. We demonstrate that the molecular requirements
of hIL13 to interact with its respective receptors are generally distinct
and can be controlled by mutagenesis of the cytokine.

L5 ANSWER 6 OF 82 MEDLINE
ACCESSION NUMBER: 1999288091 MEDLINE
DOCUMENT NUMBER: 99288091
TITLE: Differences between ***IL*** - ***4*** - and
IL - ***4*** receptor alpha-deficient mice in
chronic leishmaniasis reveal a protective role for
IL - ***13*** ***receptor*** signaling.
AUTHOR: Mohrs M; Ledermann B; Kohler G; Dorfmuller A; Gessner A;
Brombacher F
CORPORATE SOURCE: Max-Planck-Institute for Immunobiology, Freiburg, Germany.
SOURCE: JOURNAL OF IMMUNOLOGY, (1999 Jun 15) 162 (12) 7302-8.
Journal code: IFB. ISSN: 0022-1767.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals; Cancer
Journals
ENTRY MONTH: 199909
ENTRY WEEK: 19990901
AB ***IL*** - ***4*** receptor alpha-chain-deficient (IL-4Ralpha-/-)
mice were generated by homologous and site-specific recombination, using
the Cre/loxP system in BALB/c-derived embryonic stem cells. In vitro
analysis of cells from these mice revealed impaired ***IL*** - ***4***
- and IL-13-mediated functions, demonstrating that the IL-4Ralpha-chain is
an essential component of both the ***IL*** - ***4*** and the
IL - ***13*** ***receptor*** . Whereas Leishmania
major-infected BALB/c mice developed fatal progressive disease with type 2
Ab responses within 3 mo, both IL-4Ralpha-/- and ***IL*** - ***4***
-/- BALB/c mice contained infection with reduced footpad swelling,
parasite load, moderate histopathology, and type 1 Ab responses during
this time period. Conclusively, these results demonstrate an ***IL*** -
4 -dependent mechanism of susceptibility in BALB/c mice.
Nevertheless, in contrast to mutant mice, infected C57BL/6 mice healed
completely within 3 mo, indicating that additional factors are necessary
for subsequent healing and elimination of the pathogen. During the further
course of infection, IL-4Ralpha-/- mice developed progressive disease with
massive footpad swelling. Lesions became ulcerative and necrotic with
subsequent destruction of connective tissue and bones, as well as
dissemination into organs and consequent mortality within the monitored 6
mo of chronic infection. In striking contrast, ***IL*** - ***4*** -/-
mice maintained control of infection on a moderate level, but were unable
to clear the pathogen. The distinct phenotypes of the BALB/c embryonic
stem cell-derived ***IL*** - ***4*** -/- and IL-4Ralpha-/- mouse
strains identify previously unsuspected mechanisms for maintaining host
immunity to chronic infection with L. major, mediated by a functional
IL - ***13*** ***receptor*** .

L5 ANSWER 7 OF 82 MEDLINE
ACCESSION NUMBER: 1999280197 MEDLINE
DOCUMENT NUMBER: 99280197
TITLE: Receptor for interleukin 13 is a marker and therapeutic
target for human high-grade gliomas.
AUTHOR: Debinski W; Gibo D M; Hulet S W; Connor J R; Gillespie G Y
CORPORATE SOURCE: Department of Surgery, Pennsylvania State University
College of Medicine, Hershey 17033-0850, USA..
wdebinski@psghs.edu
CONTRACT NUMBER: R01 CA74145 (NCI)
SOURCE: CLINICAL CANCER RESEARCH, (1999 May) 5 (5) 985-90.
Journal code: C2H. ISSN: 1078-0432.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199910
ENTRY WEEK: 19991001
AB Glioblastoma multiforme (GBM) is an incurable brain tumor. Due to the
striking heterogeneity that characterizes GBM, there is no known
tumor-specific antigen or receptor that is expressed by a majority of GBM
patients. We found that virtually all studied human GBM specimens (23
samples) abundantly expressed a receptor for interleukin (IL)-13 in situ,
whereas normal human brain had few, if any, IL-13-binding sites. The
GBM-associated ***IL*** - ***13*** ***receptor*** was both
quantitatively and qualitatively different from and, thus, more
restrictive than the shared signaling receptor of normal tissue: it was
IL - ***4*** independent. The receptor for IL-13 was
overexpressed by a majority of cancer cells in situ. Furthermore,
cytotoxins targeted to this more restrictive IL-13R produced cures in
animals bearing xenografts of human high-grade gliomas. Thus,
unexpectedly, the receptor for an immune regulatory cytokine may be a long
sought marker and, concomitantly, a unique imaging site and therapeutic
target for GBM, the most malignant and the most heterogeneous of brain
tumors.

L5 ANSWER 8 OF 82 MEDLINE
ACCESSION NUMBER: 1999243120 MEDLINE
DOCUMENT NUMBER: 99243120
TITLE: Pancreatic cancer cells express interleukin-13 and -4
receptors, and their growth is inhibited by Pseudomonas
exotoxin coupled to interleukin-13 and -4.
AUTHOR: Kommann M; Kleeff J; Debinski W; Korc M
CORPORATE SOURCE: Department of Medicine, University of California, Irvine
92697, USA.. mkorc@uci.edu
CONTRACT NUMBER: CA-40162 (NCI)
SOURCE: ANTICANCER RESEARCH, (1999 Jan-Feb) 19 (1A) 125-31.
Journal code: 59L. ISSN: 0250-7005.
PUB. COUNTRY: Greece
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199907
ENTRY WEEK: 19990704
AB BACKGROUND: Interleukin (IL)-13 and -4 are multifunctional cytokines that
bind to specific cell-surface receptors. The aim of this study was to
determine whether pancreatic cancer cells express either receptor, and to
assess the growth suppressive effects of chimeric proteins composed of a
Pseudomonas exotoxin (PE) A mutant (PE38QQR) fused to IL-13
(IL-13-PE38QQR) or ***IL*** - ***4*** (***IL*** - ***4***
-PE38QQR) in these cells. MATERIALS AND METHODS: Northern and Western blot
analysis were used to analyze the expression of ***IL*** - ***4***
/-13 receptors and the common gamma chain (gamma c) in pancreatic cancer
cell lines. MTT growth assays were carried out to assess the effects of
IL - ***4*** /-13 and ***IL*** - ***4*** /-13-PE38QQR on
cell growth. RESULTS: All 6 pancreatic cancer cell lines examined
expressed IL-13R alpha 1 and IL-4R alpha, one cell line expressed IL-13R
alpha 2, and 5 pancreatic cancer cell lines expressed gamma c. IL-13 (5
nM) significantly enhanced the growth of 3 cell lines, whereas ***IL***
- ***4*** (5 nM) enhanced the growth of 1 cell line. In contrast,
IL-13-PE38QQR and ***IL*** - ***4*** -PE38QQR inhibited the growth of
all 6 tested cell lines. There were large variations in the individual
sensitivity of the cells, with LD50 values ranging from 100 ng/ml to 5
micrograms/ml for IL-13-PE38QQR and from 20 ng/ml to 10 micrograms/ml for
IL - ***4*** -PE38QQR. IL-13 and -4 antagonized these inhibitory
activities in some, but not all, of the cell lines. CONCLUSIONS: IL-13 and
-4 may act as mitogens toward pancreatic cancer cells by activating
IL - ***4*** - and ***IL*** - ***13*** - ***receptors***
and IL-13- and ***IL*** - ***4*** -coupled toxins may ultimately have
a role in the treatment of pancreatic cancer.

L5 ANSWER 9 OF 82 MEDLINE
ACCESSION NUMBER: 1999215813 MEDLINE
DOCUMENT NUMBER: 99215813
TITLE: An immune regulatory cytokine receptor and glioblastoma
multiforme: an unexpected link.
AUTHOR: Debinski W
CORPORATE SOURCE: Department of Surgery, Pennsylvania State University
College of Medicine, Hershey 17033-0850, USA.
SOURCE: CRITICAL REVIEWS IN ONCOGENESIS, (1998) 9 (3-4) 255-68.
Ref: 81
Journal code: A1Y. ISSN: 0893-9675.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)

LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199906
ENTRY WEEK: 19990604
AB Human high-grade gliomas (HGG) are one of the most devastating human malignancies. They are rapidly progressing heterogenous tumors for which no curable treatment is available. Although these tumors are believed to be of glial cell origin, known tumor-specific markers do not characterize them. The specific environmental conditions that cause or promote the development of HGG are not known. The pathomechanism of HGG is yet to be revealed, although more specific genetic alterations are assigned to HGG. Recently, we have found that HGG overexpress a receptor for an immune regulatory cytokine, interleukin-13 (IL-13). In fact, it appears that all patients with glioblastoma multiforme may possess this receptor. IL-13 is an antiinflammatory cytokine with many overlapping functions to its homologue, ***IL*** - ***4*** . There is a high degree of specificity of the overexpression of the ***IL*** - ***13*** ***receptor*** in HGG. This receptor is not only quantitatively but also qualitatively different from the only known functional signaling receptor for IL-13 of normal tissue. It is not shared with ***IL*** - ***4*** . The more restrictive receptor for IL-13 thus may represent a new factor specific for a disease as heterogenous as HGG.

L5 ANSWER 10 OF 82 MEDLINE
ACCESSION NUMBER: 1999171151 MEDLINE
DOCUMENT NUMBER: 99171151
TITLE: Binding of interleukin-13 and interleukin-4 to the interleukin (***IL***)- ***4*** / ***IL*** - ***13*** ***receptor*** of human synovial fibroblasts.
AUTHOR: Lutz R A; Feng N; Moser R
CORPORATE SOURCE: Institute of Clinical Chemistry, University Hospital, Zurich.
SOURCE: JOURNAL OF RECEPTOR AND SIGNAL TRANSDUCTION RESEARCH, (1999 Jan-Jul) 19 (1-4) 181-90.
Journal code: CCU. ISSN: 1079-9893.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199908
ENTRY WEEK: 19990803
AB Synovial fibroblasts expressed transcripts for IL-4R alpha, and IL-13R alpha 1 and IL-13R alpha 2. Using weighted nonlinear computer modeling of the data from equilibrium binding studies, a 2 bindings sites model fitted the data best. After occupation of the shared high affinity receptors by the non-signaling, double mutant ***IL*** - ***4*** (121)R-->D, 124Y-->D (RY- ***IL*** - ***4***) the high affinity binding of IL-13 could be abolished. A 2 binding site model still could be fitted, however the improvement in fit over a onesite model was not statistically significant. Using affinity spectra, at least 2 binding sites are apparent. After treatment with RY- ***IL*** - ***4*** , some of the high affinity binding was abolished, however not completely. A correlation between the number of binding sites and the affinity is apparent, which seriously casts doubt on the classical evaluation of binding isotherms, where the parameters are assumed to be independent. In a previous study we suggested that the large number of IL-13R alpha 2 monomers are silent receptors, likely representing a decoy target for IL-13. The high affinity binding therefore most likely represents the binding to the heterodimer consisting of IL-4R alpha and IL-13R alpha 1 or IL-13R alpha 2. The low affinity binding may represent the IL-13R alpha 2.

L5 ANSWER 11 OF 82 MEDLINE
ACCESSION NUMBER: 1999113371 MEDLINE
DOCUMENT NUMBER: 99113371
TITLE: Interleukin-4 and interleukin-13: their similarities and discrepancies.
AUTHOR: Chomarat P; Banchereau J
CORPORATE SOURCE: Schering-Plough, Laboratory for Immunological Research, Dardilly, France.
SOURCE: INTERNATIONAL REVIEWS OF IMMUNOLOGY, (1998) 17 (1-4) 1-52.
Ref: 300
Journal code: IRI. ISSN: 0883-0185.
PUB. COUNTRY: Switzerland
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199906
ENTRY WEEK: 19990601
AB Interleukin-4 (***IL*** - ***4***) and the closely related cytokine, interleukin-13 (IL-13) share many biological and immunoregulatory functions on B lymphocytes, monocytes, dendritic cells and fibroblasts. Both ***IL*** - ***4*** and IL-13 genes are located in the same vicinity on chromosome 5 and display identical major regulatory sequences in their respective promoters, thus explaining their restricted secretion pattern to activated T cells and mast cells. The ***IL*** - ***4*** and ***IL*** - ***13*** ***receptors*** are multimeric and share at least one common chain called IL-4R alpha. Recent progress made in the description of ***IL*** - ***4*** and ***IL*** - ***13*** ***receptor*** complex have demonstrated the existence of two types of ***IL*** - ***4*** receptors: one constituted by the IL-4R alpha and the gamma c chain, and a second constituted by the ***IL*** - ***4*** R alpha and the IL-13R alpha 1 and able to transduce both ***IL*** - ***4*** and IL-13 signals. Specific ***IL*** - ***13*** ***receptors*** are results from the association between the IL-4R alpha and the IL-13R alpha 2 or between two IL-13R alpha. Furthermore, similarities in ***IL*** - ***4*** and IL-13 signal transduction have been also described, thus explaining the striking overlapping of ***IL*** - ***4*** - and IL-13-induced biological activities such as regulation of antibody production and inflammation. However, the restricted expression of ***IL*** - ***4*** to type 2 helper T lymphocytes as well as the inability of IL-13 to regulate T cell differentiation due to a lack of ***IL*** - ***13*** ***receptors*** on T lymphocytes represent the major differences between these cytokines. This would indicate that although ***IL*** - ***4*** and IL-13 share a large number of properties, precise mechanisms of regulation are also present to guarantee their distinct functions.

L5 ANSWER 12 OF 82 MEDLINE
ACCESSION NUMBER: 1999077182 MEDLINE
DOCUMENT NUMBER: 99077182
TITLE: The distribution of ***IL*** - ***13*** ***receptor*** alpha1 expression on B cells, T cells and monocytes and its regulation by IL-13 and ***IL*** - ***4*** .
AUTHOR: Graber P; Gretener D; Herren S; Aubry J P; Elson G; Poudrier J; Lecoanet-Henchoz S; Alouani S; Losberger C; Bonnefoy J Y; Kosco-Vilbois M H; Gauchat J F
CORPORATE SOURCE: Geneva Biomedical Research Institute, Plan-les-Ouates, Switzerland.
SOURCE: EUROPEAN JOURNAL OF IMMUNOLOGY, (1998 Dec) 28 (12) 4286-98.
Journal code: EN5. ISSN: 0014-2980.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199903
ENTRY WEEK: 19990301
AB To study the expression of ***IL*** - ***13*** ***receptor*** alpha1 (IL-13Ralpha1), specific monoclonal antibodies (mAb) were generated. Surface expression of the IL-13Ralpha1 on B cells, monocytes and T cells was assessed by flow cytometry using these specific mAb. Among tonsillar B cells, the expression was the highest on the IgD+ CD38- B cell subpopulation which is believed to represent naive B cells. Expression was also detectable on a large fraction of the IgD-CD38- B cells but not on CD38+ B cells. Activation under conditions which promote B cell Ig class switching up-regulated the expression of the receptor. However, the same stimuli had an opposite effect for IL-13Ralpha1 expression levels on monocytes. While IL-13Ralpha1 mRNA was clearly detectable in T cell preparations, no surface expression was detected. However, permeabilization of the T cells showed a clear intracellular expression of the receptor. A soluble form of the receptor was immunoprecipitated from the supernatant of activated peripheral T cells, suggesting that T cell IL-13Ralpha1 might have functions unrelated to the capacity to form a type II ***IL*** - ***4*** /IL-13R with IL-4Ralpha.

L5 ANSWER 13 OF 82 MEDLINE
ACCESSION NUMBER: 1999034937 MEDLINE
DOCUMENT NUMBER: 99034937
TITLE: Human glioma cells overexpress receptors for interleukin 13 and are extremely sensitive to a novel chimeric protein composed of interleukin 13 and pseudomonas exotoxin.
AUTHOR: Debinski W; Obiri N I; Powers S K; Pastan I; Puri R K
CORPORATE SOURCE: The Milton S. Hershey Medical Center, The Pennsylvania State University College of Medicine, Department of Surgery, Division of Neurosurgery, Hershey, Pennsylvania 17033, USA.. debinski@debin.nsr.hmc.psu.edu
SOURCE: CLINICAL CANCER RESEARCH, (1995 Nov) 1 (11) 1253-8.
Journal code: C2H. ISSN: 1078-0432.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199904
ENTRY WEEK: 19990402
AB Recently, we have demonstrated that a spectrum of human adenocarcinoma cell lines express binding sites for interleukin 13 (IL-13). These cells are killed by a chimeric protein composed of human (h) IL-13 and a derivative of Pseudomonas exotoxin, PE38QQR (Debinski et al., J. Biol. Chem., 270: 16775-16780, 1995). The cell killing was hIL-13- and hIL-4-specific, indicating that a common binding site for the two cytokines is present in several solid tumor cell lines. Herein, we report that an array of established glioma cell lines is killed by very low concentrations of hIL-13-PE38QQR, often reaching <1 ng/ml (<20 pM). Glioma cells express up to 30,000 molecules of ***IL*** - ***13*** ***receptor*** /cell which has intermediate affinity toward hIL-13. hIL-13-PE38QQR is more active (up to 3 logs difference in cytotoxic activities) than are the corresponding chimeric toxins containing hIL-4 or hIL-6. The cytotoxic action of hIL-13-PE38QQR is blocked by an excess of hIL-13 on all cell lines studied, and it is not neutralized by hIL-4 on some of these cells. Our results show that human brain cancers richly express receptors for IL-13. Furthermore, the interaction detected previously between receptors for IL-13 and ***IL*** -

4 on
solid tumors cell lines is of a qualitatively different character in U-251
MG and U-373 MG glioma cells. The receptor for IL-13 may represent a new
marker of brain cancers and an attractive target for anticancer therapies.

L5 ANSWER 14 OF 82 MEDLINE
ACCESSION NUMBER: 1998391042 MEDLINE
DOCUMENT NUMBER: 98391042
TITLE: The murine ***IL*** - ***13*** ***receptor***
alpha 2: molecular cloning, characterization, and comparison with murine ***IL*** - ***13*** ***receptor*** alpha 1.
AUTHOR: Donaldson D D; Whitters M J; Fitz L J; Neben T Y; Finnerty
H; Henderson S L; O'Hara R M Jr; Beier D R; Turner K J;
Wood C R; Collins M
CORPORATE SOURCE: Genetics Institute, Immunology Department, Cambridge, MA
02140, USA.
CONTRACT NUMBER: RO1 HD29028 (NICHD)
RO1HG00951 (NHGRI)
SOURCE: JOURNAL OF IMMUNOLOGY, (1998 Sep 1) 161 (5) 2317-24.
Journal code: IFB. ISSN: 0022-1767.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals; Cancer
Journals
OTHER SOURCE: GENBANK-U65747
ENTRY MONTH: 199811
AB Two components of a receptor complex for IL-13, the IL-4R and a low
affinity IL-13-binding chain, IL-13R alpha 1, have been cloned in mice and
humans. An additional high affinity binding chain for IL-13, IL-13R alpha
2, has been described in humans. We isolated a cDNA from the thymus that
encodes the murine orthologue of the human IL-13R alpha 2. The predicted
protein sequence of murine IL-13R alpha 2 (mIL-13R alpha 2) has 59%
overall identity to human IL-13R alpha 2 and is closely related to the
murine low affinity IL-13-binding subunit, IL-13R alpha 1. The genes for
both mIL-13-binding chains map to the X chromosome. A specific interaction
between mIL-13R alpha 2.Fc protein and IL-13 was demonstrated by surface
plasmon resonance using a BIACORE instrument. Ba/F3 cells that were
transfected with mIL-13R alpha 2 expressed 5000 molecules per cell and
bound IL-13 with a single Kd of 0.5 to 1.2 nM. However, these cells did
not proliferate in response to IL-13, and the ***IL*** - ***4***
dose response was unaffected by high concentrations of IL-13. In contrast,
the expression of mIL-13R alpha 1 by Ba/F3 cells resulted in a sensitive
proliferative response to IL-13. Consistent with its lower affinity for
IL-13, IL-13R alpha 1.Fc was 100-fold less effective than IL-13R alpha
2.Fc in neutralizing IL-13 in vitro. These results show that mIL-13R alpha
2 and mIL-13R alpha 1 are not functionally equivalent and predict distinct
roles for each polypeptide in IL-13R complex formation and in the
modulation of IL-13 signal transduction.

L5 ANSWER 15 OF 82 MEDLINE
ACCESSION NUMBER: 1998389089 MEDLINE
DOCUMENT NUMBER: 98389089
TITLE: Two different ***IL*** - ***13*** ***receptor***
chains are expressed in normal human skin fibroblasts, and
IL - ***4*** and IL-13 mediate signal transduction through a common pathway.
AUTHOR: Murata T; Husain S R; Mohri H; Puri R K
CORPORATE SOURCE: Laboratory of Molecular Tumor Biology, Division of Cellular
and Gene Therapy, Center for Biologics Evaluation and
Research, Food and Drug Administration, Bethesda, MD 20892,
USA.
SOURCE: INTERNATIONAL IMMUNOLOGY, (1998 Aug) 10 (8) 1103-10.
Journal code: AY5. ISSN: 0953-8178.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199901
ENTRY WEEK: 19990104
AB IL-13 and ***IL*** - ***4*** , pleiotropic immune regulatory
cytokines, have been shown to mediate similar prominent effects in human
fibroblast cell lines. However, molecular mechanisms for their redundant
effects are not known. Here, we have investigated the structure of
IL - ***13*** ***receptors*** (IL-13R) and molecular
mechanisms of signal transduction through IL-13 and ***IL*** - ***4***
receptors in non-transformed normal skin fibroblast cell lines. We
demonstrate that high-affinity IL-13R is expressed in normal skin
fibroblast cell lines. Upon [125I]IL-13 cross-linking, a approximately
60-70 kDa band was observed in sk559 and sk574 fibroblast cell lines. By
RT-PCR analysis, mRNA for IL-13R alpha, IL-13R alpha' and IL-4Rbeta chains
were expressed; however, the IL-2Rgamma chain, shown to participate and
modulate ***IL*** - ***4*** and IL-13 binding, was not expressed in
any of the cell lines examined. The Janus kinase (JAK)2 and Tyk2 were
phosphorylated in response to ***IL*** - ***4*** or IL-13 in sk559
and sk574 cell lines. JAK1 was also phosphorylated in one of two cell
lines while JAK3 was present but not phosphorylated in any of the cell
lines studied. A signal transduction and activator of transcription
(STAT)6 was also activated in response to both IL. An insulin receptor
substrate (IRS)-1 was constitutively phosphorylated and its phosphorylation level was augmented in response to both IL. These results
suggest that the mechanism of signal transduction through IL-13 and
IL - ***4*** receptors in human fibroblast cell lines is
similar, and this may, at least in part, be responsible for the redundant
effects of these two cytokines. In addition, JAK2 tyrosine kinase instead
of JAK3 appears to play a major role in ***IL*** - ***4*** - and
IL-13-induced signal transduction in human fibroblasts.

L5 ANSWER 16 OF 82 MEDLINE
ACCESSION NUMBER: 1998389048 MEDLINE
DOCUMENT NUMBER: 98389048
TITLE: The role of IL-13 and its receptor in allergy and inflammatory responses.
AUTHOR: de Vries J E
CORPORATE SOURCE: Novartis Research Institute, Vienna, Austria.
SOURCE: JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY, (1998 Aug) 102
(2) 165-9. Ref: 19
Journal code: H53. ISSN: 0091-6749.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199812
ENTRY WEEK: 19981201
AB IL-13 is a cytokine that is produced by different T-cell subsets and
dendritic cells. IL-13 shares many biologic activities with ***IL*** -
4 . This is due to the fact that IL-13- and ***IL*** - ***4***
-receptor complexes share the ***IL*** - ***4*** -receptor
alpha-chain, which is important for signal transduction. T cells do not
express functional ***IL*** - ***13*** ***receptors*** . This is
the reason why IL-13, in contrast to ***IL*** - ***4*** , fails to
induce TH2-cell differentiation, one of the hallmarks of the allergic
response. However, IL-13 is required for optimal induction of IgE
synthesis, particularly in situations in which ***IL*** - ***4***
production is low or absent. On the other hand, IL-13 inhibits
proinflammatory cytokine and chemokine production in vitro and has potent
antiinflammatory activities in vivo. From these observations, it can be
concluded that IL-13 is an antiinflammatory cytokine that plays a unique
role in the induction and maintenance of IgE production and IgE-mediated
allergic responses.

L5 ANSWER 17 OF 82 MEDLINE
ACCESSION NUMBER: 1998266220 MEDLINE
DOCUMENT NUMBER: 98266220
TITLE: The interleukin-4/interleukin-13 receptor of human synovial
fibroblasts: overexpression of the nonsignaling interleukin-13 receptor alpha2.
AUTHOR: Feng N; Lugli S M; Schnyder B; Gauchat J F; Graber P;
Schlagenhauf E; Schnarr B; Wiederkehr-Adam M; Duschl A;
Heim M H; Lutz R A; Moser R
CORPORATE SOURCE: Institute of Clinical Chemistry, University Hospital,
Zurich, Switzerland.
SOURCE: LABORATORY INVESTIGATION, (1998 May) 78 (5) 591-602.
Journal code: KZ4. ISSN: 0023-6837.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199808
ENTRY WEEK: 19980804
AB Interleukin (***IL***)- ***4*** and IL-13 are known to bind to
shared heteromultimeric receptor complexes of variable composition. Given
the many regulatory effects of ***IL*** - ***4*** and IL-13 on
synovial cells, we aimed to characterize their ***IL*** - ***4*** /
IL - ***13*** ***receptor*** (R). Cultivated synovial
fibroblasts expressed transcripts for IL-4Ralpha and IL-13Ralpha1, the
human homolog of the recently cloned mouse IL-13R, but not the common
gamma-chain of the IL-2R. In particular, IL-13Ralpha2 mRNA, encoding a
different IL-13R recently cloned from human renal carcinoma cells, was
expressed at a strikingly high level. Correspondingly, a predominant
protein migrating at 65 to 75 kd was cross-linked by iodinated IL-13 and
was not cross-competed by an excess of unlabeled ***IL*** - ***4*** .
However, by flow cytofluorometry, IL-13Ralpha1 (detected by the
anti-IL-13Ralpha1 mAb 65) and IL-4Ralpha (detected by the mAb S697) were
expressed at similar low density. Radioligand binding studies revealed for
both cytokines approximately 300 receptors/cell with similar high
affinity. An additional class of IL-13Rs was identified after occupation
of the shared high-affinity receptors by the nonsignaling, double-mutant
IL-4121R-->D, 124Y-->D (RY- ***IL*** - ***4***). In these
experiments, 125I-IL-13 bound to a single receptor population with a Kd of
approximately 300 pM and approximately 5000 sites/cell, matching the
published affinity of monomeric IL-13Ralpha2 when expressed in COS7 cells.
RY- ***IL*** - ***4*** blocked the ***IL*** - ***4*** - and
IL-13-mediated vascular cell adhesion molecule (VCAM)-1 expression and
Stat6 activation, suggesting that the large number of high-affinity
IL-13Ralpha2 monomers are silent receptors, likely representing a decoy
target for IL-13.

L5 ANSWER 18 OF 82 MEDLINE
ACCESSION NUMBER: 1998256353 MEDLINE
DOCUMENT NUMBER: 98256353
TITLE: Interleukin (***IL***) ***4*** and IL-13 act on
human lung fibroblasts. Implication in asthma.
AUTHOR: Doucet C; Brouty-Boye D; Pottin-Clemenceau C; Canonica G W;
Jasmin C; Azzarone B

CORPORATE SOURCE: U268 INSERM Hopital Paul Brousse, 94807 Villejuif Cedex,
France.
SOURCE: JOURNAL OF CLINICAL INVESTIGATION, (1998 May 15) 101 (10)
2129-39.
Journal code: HS7. ISSN: 0021-9738.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals; Cancer
Journals
ENTRY MONTH: 199808
ENTRY WEEK: 19980804
AB Airway hyperresponsiveness leading to subepithelial fibrosis is mediated
by inflammatory cells activated by T helper (Th) 2-derived cytokines such
as ***IL*** - ***4*** and IL-5. By analyzing the phenotype and
response of human lung fibroblasts derived from either fetal (ICIG7) or
adult (CCL202) tissue as well as from a Th2-type stromal reaction (FPA) to
IL - ***4*** and IL-13, we provide evidence that human lung
fibroblasts may behave as inflammatory cells upon activation by ***IL***
- ***4*** and IL-13. We show that the three types of fibroblasts
constitute different populations that display a distinct pattern in cell
surface molecule expression and proinflammatory cytokine and chemokine
release. All fibroblasts express functional but different ***IL*** -
4 / ***IL*** - ***13*** ***receptors*** . Thus, while
IL - ***4*** receptor (R) alpha and IL-13Ralpha1 chains are
present in all the cells, CCL202 and FPA fibroblasts coexpress the
IL-13Ralpha2 and the IL-2Rgamma chain, respectively, suggesting the
existence of a heterotrimeric receptor (IL-4Ralpha/IL-13Ralpha/IL-2Rgamma)
able to bind ***IL*** - ***4*** and IL-13. Stimulation with
IL - ***4*** or IL-13 triggers in the fibroblasts a differential
signal transduction and upregulation in the expression of beta1 integrin
and vascular cell adhesion molecule 1 and in the production of IL-6 and
monocyte chemoattractant protein 1, two inflammatory cytokines important
in the pathogenesis of allergic inflammation. Our results suggest that
when activated by ***IL*** - ***4*** and IL-13, different subsets of
lung fibroblasts may act as effector cells not only in the pathogenesis of
asthma but also in lung remodeling processes. They may also differentially
contribute to trigger and maintain the recruitment, homing, and activation
of inflammatory cells.

L5 ANSWER 19 OF 82 MEDLINE
ACCESSION NUMBER: 1998250014 MEDLINE
DOCUMENT NUMBER: 98250014
TITLE: Novel way to increase targeting specificity to a human
glioblastoma-associated receptor for interleukin 13.
AUTHOR: Debinski W; Gibo D M; Puri R K
CORPORATE SOURCE: Section of Neurosurgery, Pennsylvania State University
College of Medicine, Hershey 17033-0850, USA..
wdebinski@PSGHS.EDU
SOURCE: INTERNATIONAL JOURNAL OF CANCER, (1998 May 18) 76 (4)
547-51.
Journal code: GQU. ISSN: 0020-7136.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199808
ENTRY WEEK: 19980801
AB Human brain cancers (gliomas) overexpress large numbers of a receptor for
interleukin 13 (IL13), making this receptor an attractive target for
anti-glioma therapies. We have recently proposed that the
glioma-associated ***IL13*** ***receptor*** is different from the
one expressed on some hemopoietic and somatic cells. In an attempt to
identify an even more glioma-specific target, we have used an antagonist
of a related cytokine, ***IL4*** , which neutralizes the physiological
effects of both IL13 and ***IL4*** on normal cells. Here we
demonstrate that the ***IL4*** antagonist also counteracts the action
of cytotoxins targeted to the ***IL13*** ***receptor*** on normal
human cells. Importantly, the ***IL4*** antagonist does not inhibit
IL13-based cytotoxins on glioma cells at all. Thus, the ***IL13***
receptor on glioma cells can be categorized as tumor-specific in
the presence of an ***IL4*** antagonist. We conclude that ***IL13***
receptor -directed cytotoxins can be delivered to glioma cells
without being cytotoxic to normal cells.

L5 ANSWER 20 OF 82 MEDLINE
ACCESSION NUMBER: 1998217192 MEDLINE
DOCUMENT NUMBER: 98217192
TITLE: An antagonistic ***IL*** - ***4*** mutant prevents
type I allergy in the mouse: inhibition of the ***IL***
- ***4*** / ***IL*** - ***13*** ***receptor***
system completely abrogates humoral immune response to
allergen and development of allergic symptoms in vivo.
AUTHOR: Grunewald S M; Werthmann A; Schnarr B; Klein C E; Brocker E
B; Mohrs M; Brombacher F; Sebald W; Duschl A
CORPORATE SOURCE: Biozentrum, Physiologische Chemie II, Universitat Wurzburg,
Germany.
SOURCE: JOURNAL OF IMMUNOLOGY, (1998 Apr 15) 160 (8) 4004-9.
Journal code: IFB. ISSN: 0022-1767.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals; Cancer
Journals
ENTRY MONTH: 199807
ENTRY WEEK: 19980702
AB We have analyzed in vivo effects of the murine ***IL*** - ***4***
mutant Q116D/Y119D (QY), which forms unproductive complexes with
IL-4Ralpha and is an antagonist for ***IL*** - ***4*** and IL-13 in
vitro. Treatment of BALB/c mice with QY during immunization with OVA
completely inhibited synthesis of OVA-specific IgE and IgG1.
BALB/c-derived knockout mice lacking either ***IL*** - ***4*** or
IL-4Ralpha also did not develop specific IgE or IgG1, but mounted a much
stronger IgG2a and IgG2b response than wild-type mice. In contrast, QY
treatment of normal BALB/c mice suppressed specific IgG2a, IgG2b, and IgG3
synthesis, which may indicate the development of tolerance toward the
allergen. Associated with the lack of IgE synthesis in QY-treated
wild-type mice and in ***IL*** - ***4*** (-/-) mice used as a control
was the failure to develop immediate cutaneous hypersensitivity or
anaphylactic shock upon rechallenge. Interestingly, QY treatment also
inhibited humoral immune responses and allergic reactivity in SJL/J mice,
a strain that did not produce IgE, but displayed IgE-independent mast cell
degranulation mediated by specific IgG1. We conclude that QY inhibits
Ag-specific humoral immune responses and allergic symptoms mediated either
by IgE or IgG1. It needs to be clarified how QY abrogates synthesis of
IgG2a, IgG2b, and IgG3, but the induction of tolerance toward nonhazardous
protein Ags should be advantageous for therapy of atopic disorders and
other Th2-dominated diseases.

L5 ANSWER 21 OF 82 MEDLINE
ACCESSION NUMBER: 1998212024 MEDLINE
DOCUMENT NUMBER: 98212024
TITLE: Regulation of interleukin-13 receptor constituents on
mature human B lymphocytes.
AUTHOR: Ogata H; Ford D; Kouttab N; King T C; Vita N; Minty A;
Stoeckler J; Morgan D; Girasole C; Morgan J W; Maizel A L
CORPORATE SOURCE: Roger Williams Medical Center/Brown University, Providence,
Rhode Island 02908, USA.
CONTRACT NUMBER: CA45148 (NCI)
R29-DK49649 (NIDDK)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1998 Apr 17) 273 (16)
9864-71.
Journal code: HIV. ISSN: 0021-9258.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199807
ENTRY WEEK: 19980704
AB Human B cells stimulated through both their immunoglobulin and CD40
receptors up-regulate 745 +/- 51 interleukin (IL)-13 ligand binding sites
with an affinity of 0.91 +/- 0.08 nM within 24 h. IL-13 binds primarily to
the IL-13Ralpha1 with subsequent sequestration of the IL-4Ralpha into the
complex. IL-13Ralpha1 may also be found in those receptors capable of
binding ***IL*** - ***4*** . gamma chain (gammac) participates in
receptors capable of binding ***IL*** - ***4*** but is not found in
association with bound IL-13. Dimeric receptors composed of the IL-4Ralpha
complexed with either the IL-13Ralpha1 or gammac occur simultaneously
within defined B cell populations. mRNAs for all receptor constituents are
increased subsequent to immunoglobulin stimulation alone, while maximal
expression of IL-13Ralpha1 is more dependent upon co-stimulation of
immunoglobulin and CD40 receptors. mRNA levels for IL-13Ralpha1 vary over
a wider range subsequent to surface stimulation than other receptor
components. Although gammac is not bound to IL-13 in B cells under the
conditions evaluated, it may influence IL-13 binding by competing with
IL-13Ralpha1 for association/sequestration with the IL-4Ralpha chain.
IL-13Ralpha2 does not participate in the ***IL*** - ***13***
receptor that is up-regulated upon activation of quiescent
tonsillar B lymphocytes, although mRNA for the protein may be found in the
centroblastic fraction of tonsillar cells.

L5 ANSWER 22 OF 82 MEDLINE
ACCESSION NUMBER: 97426445 MEDLINE
DOCUMENT NUMBER: 97426445
TITLE: An interleukin (***IL***)- ***13*** ***receptor***
lacking the cytoplasmic domain fails to transduce
IL-13-induced signals and inhibits responses to ***IL***
- ***4*** .
AUTHOR: Orchansky P L; Ayres S D; Hilton D J; Schrader J W
CORPORATE SOURCE: The Biomedical Research Centre, 2222 Health Sciences Mall,
University of British Columbia, Vancouver V6T 1Z3, Canada..
patricia@brc.ubc.ca
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1997 Sep 5) 272 (36)
22940-7.
Journal code: HIV. ISSN: 0021-9258.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199712
ENTRY WEEK: 19971201
AB Interleukin (IL)-13 is a pleiotropic immunoregulatory cytokine that shares
many, although not all, of the biological activities of ***IL*** -
4 . The overlapping biological properties of ***IL*** -
4 and IL-13 appear to be due to the existence of shared components of the
receptors, and we and others showed that the ***IL*** - ***4***
receptor-alpha is involved in signal transduction paths activated by both.

We show here that expression of the ***IL*** - ***13***
receptor -alpha in two factor-dependent cell lines, the premyeloid
FD5 and the T lymphoid CT4.S, conferred the ability to grow continuously
in response to IL-13; to respond to IL-13 with tyrosine phosphorylation of
JAK1, Tyk2, IL-4Ralpha, IRS-2, and STAT6; and to respond to ***IL*** -
4 with tyrosine phosphorylation of Tyk2 in addition to those
induced in parental cell lines. Expression of a truncated ***IL*** -
13 ***receptor*** -alpha that lacked the cytoplasmic domain
demonstrated that this domain was essential for IL-13-dependent growth and
phosphorylation of the above substrates. Expression of this truncated
IL - ***13*** ***receptor*** also resulted in an inhibition
of biochemical and biological responses to ***IL*** - ***4*** that
was exacerbated by the presence of IL-13. These dominant inhibitory
effects indicate that the extracellular domain of the truncated ***IL***
- ***13*** ***receptor*** competes with gammac for complexes of
IL - ***4*** and the ***IL*** - ***4*** receptor-alpha,
or, when itself bound to IL-13, competes with ***IL*** - ***4*** for
the ***IL*** - ***4*** receptor-alpha.

L5 ANSWER 23 OF 82 MEDLINE
ACCESSION NUMBER: 97408450 MEDLINE
DOCUMENT NUMBER: 97408450
TITLE: The related cytokines interleukin-13 and interleukin-4 are
distinguished by differential production and differential
effects on T lymphocytes.
AUTHOR: Minty A; Asselin S; Bensussan A; Shire D; Vita N; Vyakarnam
A; Wijdenes J; Ferrara P; Caput D
CORPORATE SOURCE: Sanofi Recherche, Lab'ege-Innopole, France..
adrian.minty@tis1.elfsanofi.fr
SOURCE: EUROPEAN CYTOKINE NETWORK, (1997 Jun) 8 (2) 203-13.
Journal code: A56. ISSN: 1148-5493.
PUB. COUNTRY: France
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199712
ENTRY WEEK: 19971201
AB We have compared the production of the related cytokines IL-13 and
IL - ***4*** by T lymphocytes, and the effects of the two
cytokines on these cells. IL-13 and ***IL*** - ***4*** production
differ in a number of respects. IL-13 is produced at higher levels than
IL - ***4*** by activated T lymphocytes, and its accumulation in
the culture medium can be more prolonged, corresponding partly to
differential mRNA accumulation and partly to a preferential depletion of
IL - ***4*** from the culture medium. Certain inducing
combinations such as PMA and anti-CD28, stimulate high levels of IL-13 and
IL-13 mRNA, but little or no ***IL*** - ***4*** or ***IL*** -
4 mRNA. The ratio of IL-13 to ***IL*** - ***4*** , both at
protein and mRNA levels, is higher in CD8+ lymphocyte than in CD4+
lymphocyte populations. Although after in vitro polarization of peripheral
blood lymphocytes leading to type 1 and type 2 populations, IL-13 is made
principally by cells of a type 2 phenotype, as is ***IL*** - ***4***
; it can also be produced by type 1 CD4+ and CD8+ T lymphocyte clones
making large amounts of IFN-gamma and very little ***IL*** - ***4***
. IL-13 and ***IL*** - ***4*** exert different effects on T
lymphocyte functions. IL-13 does not significantly inhibit the
IL-2-induced T lymphocyte production of IFN-gamma, RANTES, MIP-1 alpha or
MIP-1 beta, nor that of perforin mRNA, as does ***IL*** - ***4*** .
We have also been unable to demonstrate STAT6 activation by IL-13 on T
lymphocytes purified in a number of ways, despite strong activation of
STAT6 by ***IL*** - ***4*** in these cells. This is contrary to some
previous reports, but is consistent with the notion that the majority of T
lymphocytes lack functional ***IL*** - ***13*** ***receptors*** .
A higher and more prolonged T lymphocyte production of IL-13 than that of
IL - ***4*** may thus be permissible because IL-13 does not
inhibit T-cell functions. Conversely, sustained IL-13 production may be
partly due to the absence of receptor-mediated depletion of this cytokine.

L5 ANSWER 24 OF 82 MEDLINE
ACCESSION NUMBER: 97321053 MEDLINE
DOCUMENT NUMBER: 97321053
TITLE: Chromosome mapping and expression of the human
interleukin-13 receptor.
AUTHOR: Guo J; Apiou F; Mellerin M P; Lebeau B; Jacques Y;
Minvielle S
CORPORATE SOURCE: INSERM U211, Institut de Biologie, Nantes, France.
SOURCE: GENOMICS, (1997 May 15) 42 (1) 141-5.
Journal code: GEN. ISSN: 0888-7543.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-Y08768
ENTRY MONTH: 199709
ENTRY WEEK: 19970902
AB Interleukin-13 (IL-13) is a cytokine secreted by activated T cells and
shares most but not all biological activities with interleukin-4 (
IL - ***4***). Both cytokines play an important role as a switch
factor directing synthesis of IgE; they act on monocytes and endothelial
cells, but unlike ***IL*** - ***4*** , IL-13 does not act on T cells.
These cytokines have both common and distinct components in their
respective receptors. Based on sequence similarity shared by cytokine
receptor family members, we have identified a cDNA encoding the human
IL - ***13*** ***receptor*** (IL-13R). This cDNA was used to
examine the pattern of IL-13R mRNA expression by Northern blot analyses of
poly(A)+ RNA purified from different human tissues and cell lines. Among
several myeloma cell lines analyzed, the U266 cell line was the only one
found to express IL-13R transcripts. This cell line is also the only one
described as producing IgE. The IL-13R gene was mapped to chromosome Xq24
by in situ hybridization. Interestingly, this locus is near that of the
CD40 ligand gene, the product of which is also involved, like IL-13, in
proliferation and IgE isotype switching of human B cells. The human IL-13R
gene maps between two cytokine receptor genes located on the chromosome
arm Xq region: the interleukin-2 receptor gamma chain gene (Xq13.1) and
the interleukin-9 receptor gene (Xq28). The lack of nucleotide sequence
similarity suggests unrelated evolutionary pathways between these receptor
genes.

L5 ANSWER 25 OF 82 MEDLINE
ACCESSION NUMBER: 97238889 MEDLINE
DOCUMENT NUMBER: 97238889
TITLE: Identification, purification, and characterization of a
soluble interleukin (IL)-13-binding protein. Evidence that
it is distinct from the cloned ***Il*** - ***13***
receptor and ***Il*** - ***4*** receptor
alpha-chains.
AUTHOR: Zhang J G; Hilton D J; Willson T A; McFarlane C; Roberts B
A; Moritz R L; Simpson R J; Alexander W S; Metcalf D;
Nicola N A
CORPORATE SOURCE: Walter and Eliza Hall Institute of Medical Research and the
Cooperative Research Centre for Cellular Growth Factors,
P.O. Royal Melbourne Hospital, Victoria 3050, Australia.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1997 Apr 4) 272 (14)
9474-80.
Journal code: HIV. ISSN: 0021-9258.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199707
AB Interleukin-4 (***IL*** - ***4***) and interleukin-13 (IL-13) are
structurally and functionally related cytokines which play an important
role in the regulation of the immune response to infection. The functional
similarity of ***IL*** - ***4*** and IL-13 can be explained, at
least in part, by the common components that form their cell surface
receptors, namely the ***IL*** - ***4*** receptor alpha-chain
(IL-4Ralpha) and the ***IL*** - ***13*** ***receptor***
alpha-chain (IL-13Ralpha). Soluble forms of the IL-4Ralpha have also been
described and implicated in modulating the effect of ***IL*** -
4 . In this paper we describe the presence of a 45,000-50,000 Mr
IL-13-binding protein (IL-13BP) in the serum and urine of mice. This
protein binds IL-13 with a 100-300-fold higher affinity (KD = 20-90 pM)
than does the cloned IL-13Ralpha (KD = 3-10 nM). In addition to this
functional difference, the IL-13BP appears to be structurally and
antigenically distinct from the IL-13Ralpha. Finally, unlike the cloned
receptor, the IL-13BP acts as a potent inhibitor of IL-13 binding to its
cell surface receptor, raising the possibility that it may be used to
modulate the effects of IL-13 in vivo.

L5 ANSWER 26 OF 82 MEDLINE
ACCESSION NUMBER: 97190270 MEDLINE
DOCUMENT NUMBER: 97190270
TITLE: Tumor necrosis factor alpha enhances the expression of the
interleukin (***IL***)- ***4*** receptor alpha-chain
on endothelial cells increasing ***IL*** - ***4*** or
IL-13-induced Stat6 activation.
AUTHOR: Lugli S M; Feng N; Heim M H; Adam M; Schnyder B; Etter H;
Yamage M; Eugster H P; Lutz R A; Zurawski G; Moser R
CORPORATE SOURCE: Institute of Toxicology, Federal Institute of Technology,
CH-8057 Zurich, Switzerland.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1997 Feb 28) 272 (9)
5487-94.
Journal code: HIV. ISSN: 0021-9258.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199706
AB Functional receptors for interleukin (***IL***)- ***4*** and IL-13
on endothelial cells consist of the 130-kDa ***IL*** - ***4***
receptor alpha-chain (IL-4Ralpha) and a 65-75-kDa IL-13 binding subunit
that are expressed in a ratio of about 1:3, respectively. The restricted
number of IL-4Ralpha limits subunit heterodimerization and in turn
receptor-mediated signaling. We report here, the effects of tumor necrosis
factor alpha (TNF-alpha) on the expression of the receptor subunits for
IL - ***4*** and IL-13. By flow cytofluorometry and
receptor-binding analysis of iodinated ***IL*** - ***4*** and IL-13,
stimulation with TNF-alpha-induced a 2-3-fold increase of the IL-4Ralpha
expression. The up-regulation was also confirmed at the transcriptional

level by reverse transcription-polymerase chain reaction. Radioligand
cross-linking experiments revealed no change in the subunit composition of
the TNF-alpha-induced receptor complex. Nevertheless, TNF-alpha
stimulation led to increased activation of the ***IL*** - ***4***
-specific signal transducers and activators of transcription protein
(Stat6) by ***IL*** - ***4*** and IL-13. Thus, TNF-alpha corrects
the subunit imbalance of the endothelial ***IL*** - ***4*** .
IL - ***13*** ***receptor*** complex thereby increasing
receptor heterodimerization and in turn the signaling capability by
IL - ***4*** and IL-13.

L5 ANSWER 27 OF 82 MEDLINE
ACCESSION NUMBER: 97174273 MEDLINE
DOCUMENT NUMBER: 97174273
TITLE: X-SCID B cell responses to interleukin-4 and interleukin-13
are mediated by a receptor complex that includes the
interleukin-4 receptor alpha chain (p140) but not the gamma
c chain.
AUTHOR: Matthews D J; Hibbert L; Friedrich K; Minty A; Callard R E
CORPORATE SOURCE: Immunobiology Unit, Institute of Child Health, London, GB.
SOURCE: EUROPEAN JOURNAL OF IMMUNOLOGY, (1997 Jan) 27 (1) 116-21.
Journal code: EN5. ISSN: 0014-2980.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199705
AB This study investigates the effect of interleukin (***IL***)- ***4***
mutant proteins and a monoclonal antibody to the ***IL*** - ***4***
receptor alpha chain on ***IL*** - ***4*** and IL-13 response by B
cells from X-linked severe combined immunodeficiency (X-SCID) patients in
which the common gamma chain (gamma c chain) gene mutations have been
fully characterized and no gamma c chain expression was detected. In this
gamma c chain gene knockout model, it was confirmed that the gamma c chain
is essential for B cell responses to IL-2 but not for ***IL*** -
4 or IL-13. Dose-response curves for X-SCID and normal B cell
responses to ***IL*** - ***4*** were indistinguishable, showing that
the loss of the gamma c chain did not diminish the sensitivity of B cells
to ***IL*** - ***4*** . The mutant protein ***IL*** - ***4***
(Y124D) and an antibody to the IL-4R alpha chain both inhibited responses
of X-SCID B cells to ***IL*** - ***4*** and IL-13, showing that
X-SCID B cell responses to these cytokines are mediated by a receptor
complex that includes the IL-4R alpha chain but not the gamma c chain.
Another mutant protein, ***IL*** - ***4*** (R88D), which has greatly
reduced affinity for IL-4R alpha, was found to inhibit responses by normal
B cells to ***IL*** - ***4*** but not to IL-13. ***IL*** -
4 (R88D), did not, however, inhibit X-SCID B cell responses to
IL - ***4*** . This result is consistent with ***IL*** -
4 (R88D) inhibition of responses mediated by receptor complexes
that include the gamma c chain. We propose that X-SCID B cells responses
to ***IL*** - ***4*** are mediated by an ***IL*** - ***13***
receptor complex comprised of the IL-4R alpha chain associated
with the recently cloned IL-13R binding protein. This model has major
implications for understanding normal B cell responses to ***IL*** -
4 .

L5 ANSWER 28 OF 82 MEDLINE
ACCESSION NUMBER: 97165986 MEDLINE
DOCUMENT NUMBER: 97165986
TITLE: Cloning of the human IL-13R alpha1 chain and reconstitution
with the IL4R alpha of a functional ***IL*** - ***4***
/ ***IL*** - ***13*** ***receptor*** complex.
AUTHOR: Miloux B; Laurent P; Bonnin O; Lupker J; Caput D; Vita N;
Ferrara P
CORPORATE SOURCE: Sanofi Recherche, Lab`ege Innopole, France.
SOURCE: FEBS LETTERS, (1997 Jan 20) 401 (2-3) 163-6.
Journal code: EUH. ISSN: 0014-5793.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
OTHER SOURCE: GENBANK-Y09328
ENTRY MONTH: 199705
AB The human homologue of the recently cloned murine IL-13 binding protein
(IL-13R alpha1) was cloned from a cDNA library derived from the carcinoma
cell line CAKI-1. The cloned cDNA encodes a 427 amino acid protein with
two consensus patterns characteristic of the hematopoietic cytokine
receptor family and a short cytoplasmic tail. The human protein is 74%
identical to the murine IL-13R alpha1, and 27% identical to the human
IL-13R alpha2. CHO cells expressing recombinant hIL-13R alpha1
specifically bind IL-13 (Kd approximately 4 nM) but not ***IL*** -
4 . Co-expression of the cloned cDNA with that of IL-4R alpha
resulted in a receptor complex that displayed high affinity for IL-13 (Kd
approximately 30 pM), and that allowed cross-competition of IL-13 and
IL - ***4*** . Electrophoretic mobility shift assay showed that
IL-13 and ***IL*** - ***4*** were able to activate Stat6 in cells
expressing both IL-4R alpha and IL-13R alpha1, while no activation was
observed in cells expressing either one or the other alone.

L5 ANSWER 29 OF 82 MEDLINE
ACCESSION NUMBER: 97164670 MEDLINE
DOCUMENT NUMBER: 97164670
TITLE: Interleukin (IL)-10, but not ***IL*** - ***4*** or
IL-13, inhibits cytokine production and growth in juvenile
myelomonocytic leukemia cells.
AUTHOR: Iversen P O; Hart P H; Bonder C S; Lopez A F
CORPORATE SOURCE: Division of Human Immunology, Hanson Centre for Cancer
Research, IMVS, Adelaide, Australia.
SOURCE: CANCER RESEARCH, (1997 Feb 1) 57 (3) 476-80.
Journal code: CNF. ISSN: 0008-5472.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199704
AB Juvenile myelomonocytic leukemia (JMML) carries a poor prognosis. The
endogenous production of cytokines by the JMML cells contributes to their
growth and therapeutic resistance. Interleukin (***IL***)- ***4*** ,
IL-10, and IL-13 inhibit cytokine production in monocytes. We have now
studied whether these cytokines can inhibit JMML cell cytokine production,
thereby potentially reducing the malignant cell load in this disorder. We
found that IL-10, but not ***IL*** - ***4*** or IL-13, dose
dependently inhibited JMML cell production of the hemopoietic growth
factors granulocyte-macrophage colony-stimulating factor, tumor necrosis
factor alpha, and IL-1beta. Similarly, IL-10, but not ***IL*** -
4 or IL-13, suppressed JMML colony formation and cell viability.
This was not due to the absence of receptors because we could detect mRNAs
for the ***IL*** - ***4*** and the ***IL*** - ***13***
receptor alpha subunits and the IL-2 common gamma subunit in JMML
cells. Furthermore, the receptors were active since both ***IL*** -
4 and IL-13 up-regulated surface expression of MHC class II and
down-regulated CD14 antigens on JMML cells and monocytes. Unlike activated
monocytes, the JMML cells did not produce IL-10. It is suggested that the
loss of cytokine inhibitory effects of ***IL*** - ***4*** and IL-13
could play a role in the pathogenesis of this disorder. On the other hand,
the inhibition of cytokine production, growth, and viability of JMML cells
by IL-10 suggests that this cytokine may have a therapeutic potential in
JMML.

L5 ANSWER 30 OF 82 MEDLINE
ACCESSION NUMBER: 97162178 MEDLINE
DOCUMENT NUMBER: 97162178
TITLE: Human ovarian-carcinoma cell lines express ***IL*** -
4 and ***IL*** - ***13*** ***receptors***
: comparison between ***IL*** - ***4*** - and
IL-13-induced signal transduction.
AUTHOR: Murata T; Obiri N I; Puri R K
CORPORATE SOURCE: Laboratory of Molecular Tumor Biology, Division of Cellular
and Gene Therapies, Center for Biologics Evaluation and
Research, Food and Drug Administration, Bethesda, MD 20892,
USA.
SOURCE: INTERNATIONAL JOURNAL OF CANCER, (1997 Jan 17) 70 (2)
230-40.
Journal code: GQU. ISSN: 0020-7136.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199704
AB We have reported that human ovarian-carcinoma cell lines express
high-affinity ***IL*** - ***4*** receptor. Since IL-4R has been
hypothesized to share a chain with IL-13R, we investigated whether ovarian
cancer cells express ***IL*** - ***13*** ***receptor*** . In the
present study, we report that the ovarian-carcinoma cell lines IGROV-1 and
PA-1 express varying numbers of high-affinity ***IL*** - ***13***
receptors . Furthermore, IL-13 inhibited the binding of ***IL***
- ***4*** on both ovarian-carcinoma cell lines, while ***IL*** -
4 did not inhibit IL-13 binding on IGROV-1 cell line. IL-13 and
IL - ***4*** induced the phosphorylation of JAK1, JAK2 and Tyk2
Janus kinases in PA-1 cells. In contrast, JAK3 tyrosine kinase was
expressed in PA-1 cells, but ***IL*** - ***4*** or IL-13 did not
augment its phosphorylation. In IGROV-1 cells, Tyk2 was constitutively
phosphorylated and this phosphorylation was augmented by ***IL*** -
4 or IL-13. JAK1 and JAK2 but not JAK3 were expressed but only
JAK2 was faintly phosphorylated in response to either IL-13 or ***IL***
- ***4*** respectively. IRS (insulin-receptor substrate)-1 and IRS-2
were also phosphorylated constitutively in both ovarian cancer cell lines
examined, but only the phosphorylation of IRS-1 was augmented in response
to ***IL*** - ***4*** or IL-13. STAT6 was phosphorylated and
activated in response to ***IL*** - ***4*** and IL-13 in all cell
lines examined. Our results demonstrate that ovarian cancer cell lines may
express 2 types of IL-13R and the IL-13- or ***IL*** - ***4***
-induced signaling patterns may be slightly different in each type of
receptor.

L5 ANSWER 31 OF 82 MEDLINE
ACCESSION NUMBER: 97146045 MEDLINE
DOCUMENT NUMBER: 97146045
TITLE: The ***IL*** - ***13***

receptor structure
differs on various cell types and may share more than one
component with ***IL*** - ***4*** receptor.
AUTHOR: Obiri N I; Leland P; Murata T; Debinski W; Puri R K
CORPORATE SOURCE: Laboratory of Molecular Tumor Biology, Division of Cellular
and Gene Therapies, Food and Drug Administration, Center
for Biologics Evaluation and Research, Bethesda, MD 20892,
USA.
SOURCE: JOURNAL OF IMMUNOLOGY, (1997 Jan 15) 158 (2) 756-64.
Journal code: IFB. ISSN: 0022-1767.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals; Cancer
Journals
ENTRY MONTH: 199704
AB We have reported on the expression and characteristics of IL-13R and have
demonstrated that IL-13 competes for ***IL*** - ***4*** binding
while ***IL*** - ***4*** did not compete for the IL-13 binding on
some cell types. Based on these observations, and the size of IL-13 and
IL - ***4*** cross-linked proteins, we concluded that the
receptor for IL-13 is complex and shares a subunit with the receptor for
IL - ***4*** . To explore the complexity of the IL-13R, a wide
variety of cell types was examined for IL-13 and ***IL*** - ***4***
binding. We report in this work that ***IL*** - ***4*** does not
always bind well to cells that bind IL-13, but the reverse is also true.
We also found that ***IL*** - ***4*** can compete more effectively
for IL-13 binding than IL-13 itself. Cross-linking studies support these
observations and demonstrate that 125I-labeled IL-13 bound exclusively to
a single 65- to 70-kDa protein in MA-RCC and U251 cells, while in TF-1
cells it cross-linked to two membrane proteins of 65 to 70 kDa and 140
kDa. Furthermore, by using a chimeric protein composed of IL-13 and
Pseudomonas exotoxin A, we observed that ***IL*** - ***4***
neutralized the cytotoxicity of the IL-13 toxin on COS-7 cells by blocking
a common form of the two cytokine receptors. We propose that the 65- to
70-kDa form of the IL-13R is the predominant common component shared
between IL-13 and IL-4R. However, the primary ***IL*** - ***4***
binding (p140) protein also participates in the formation of the IL-13R
complex in some cell types. In addition, the gamma(c) or another
interactive subunit may influence IL-13 binding to its receptor complex.
Thus, we propose that there are at least four forms of IL-13R.

L5 ANSWER 32 OF 82 MEDLINE
ACCESSION NUMBER: 97079260 MEDLINE
DOCUMENT NUMBER: 97079260
TITLE: Interleukin-13 is a potent activator of JAK3 and STAT6 in
cells expressing interleukin-2 receptor-gamma and interleukin-4 receptor-alpha.
AUTHOR: Malabarba M G; Rui H; Deutsch H H; Chung J; Kalthoff F S;
Farrar W L; Kirken R A
CORPORATE SOURCE: Division of Basic Science, IRSP, SAIC Frederick, MD, USA.
SOURCE: BIOCHEMICAL JOURNAL, (1996 Nov 1) 319 (Pt 3) 865-72.
Journal code: 9YO. ISSN: 0264-6021.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199703
AB The lymphocyte growth factors interleukin-2 (IL2), ***IL4*** , IL7, IL9
and IL15 use the common IL2 receptor-gamma (IL2R gamma) and activate the
IL2R gamma-associated tyrosine kinase JAK3 (Janus kinase 3). IL13 is
structurally related to ***IL4*** , competes with ***IL4*** for
binding to cell surface receptors and exhibits many similar biological
effects. The molecular basis for this functional overlap between
IL4 and IL13 has been attributed mainly to a shared use of the 140
kDa IL4R alpha, since these cytokines appear to be uniquely different in
that, according to several recent reports, IL13 does not recruit the IL2R
gamma or JAK3. This notion has been supported by the identification of a
novel 70 kDa ***IL13*** ***receptor*** in certain IL13-responsive
cell lines that lack IL2R gamma. The present study sheds new light on the
issue of functional overlap between IL13 and ***IL4*** , by
demonstrating for the first time that, in cells that express both IL2R
gamma and IL4R alpha, IL13 can mimic ***IL4*** -induced
heterodimerization of IL2R gamma and IL4R alpha, with consequent marked
activation of JAK3 and the transcription factor STAT6 (***IL4***
-STAT). Reconstitution experiments in BA/F3 cells showed that both
cytokines require the simultaneous presence of IL4R alpha and IL2R gamma
to mediate JAK3 and proliferative responses, and analysis of 12 IL4R alpha
variants showed that ***IL4*** and IL13 signals were equally affected
by mutations of the cytoplasmic domain. We conclude that IL13 activates
the IL2R gamma-associated JAK3 tyrosine kinase in appropriate cell types,
and propose that IL13 is capable of interacting with multiple receptor
subunits in a cell-dependent and combinatorial manner. Consequently, we
predict that partial disruption of IL13 signal transduction also
contributes to the severe combined immuno-deficiency syndromes associated
with inactivation of the IL2R gamma or JAK3 genes.

L5 ANSWER 33 OF 82 MEDLINE
ACCESSION NUMBER: 97067184 MEDLINE
DOCUMENT NUMBER: 97067184
TITLE: cDNA cloning and characterization of the human interleukin
13 receptor alpha chain.
AUTHOR: Aman M J; Tayebi N; Obiri N I; Puri R K; Modi W S; Leonard
W J
CORPORATE SOURCE: Laboratory of Molecular Immunology, NHLBI, National
Institutes of Health, Bethesda, Maryland 20892-1674, USA.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1996 Nov 15) 271 (46)
29265-70.
Journal code: HIV. ISSN: 0021-9258.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
OTHER SOURCE: GENBANK-U62858
ENTRY MONTH: 199703
ENTRY WEEK: 19970302
AB We have cloned cDNAs corresponding to the human interleukin 13 receptor
alpha chain (IL-13Ralpha). The protein has 76% homology to murine
IL-13Ralpha, with 95% amino acid identity in the cytoplasmic domain. Only
weak IL-13 binding activity was found in cells transfected with only
IL-13Ralpha; however, the combination of both IL-13Ralpha and IL-4Ralpha
resulted in substantial binding activity, with a Kd of approximately 400
pM, indicating that both chains are essential components of the ***IL***
- ***13*** ***receptor*** . Whereas IL-13Ralpha serves as an
alternative accessory protein to the common cytokine receptor gamma chain
(gammac) for ***IL*** - ***4*** signaling, it could not replace the
function of gammac in allowing enhanced IL-2 binding activity.
Nevertheless, the overall size and length of the cytoplasmic domain of
IL-13Ralpha and gammac are similar, and like gammac, IL-13Ralpha is
located on chromosome X.

L5 ANSWER 34 OF 82 MEDLINE
ACCESSION NUMBER: 97042342 MEDLINE
DOCUMENT NUMBER: 97042342
TITLE: Interleukin-4-specific signal transduction events are
driven by homotypic interactions of the interleukin-4
receptor alpha subunit.
AUTHOR: Lai S Y; Molden J; Liu K D; Puck J M; White M D; Goldsmith
M A
CORPORATE SOURCE: Gladstone Institute of Virology and Immunology, University
of California, San Francisco, USA.
CONTRACT NUMBER: GM54351-01 (NIGMS)
SOURCE: EMBO JOURNAL, (1996 Sep 2) 15 (17) 4506-14.
Journal code: EMB. ISSN: 0261-4189.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199703
AB Interleukin-4 (***IL*** - ***4***) exerts its effects through a
heterodimeric receptor complex (IL-4R), which contains the IL-4R(alpha)
and gamma(c) subunits. IL-4R(alpha) also functions with other partner
subunits in several receptor types, including the ***IL*** - ***13***
receptor . To examine the roles of the individual subunits within
IL-4R complexes, we employed a chimeric system that recapitulates native
IL-4R function as verified by the activation of the kinases, JAK1 and
JAK3, and induction of STAT-6. When a mutant gamma(c) subunit in which the
four cytoplasmic tyrosines were converted to phenylalanine was paired with
the cytoplasmic domain of the IL-4R(alpha) chain, specificity within the
JAK-STAT pathway was not altered. Signaling events were examined further
in cells expressing the IL-4R(alpha) chimera alone without the gamma(c)
chimera. Ligand-induced homodimerization of these receptors activated the
IL - ***4*** signaling program despite the absence of gamma(c),
including induction of JAK1 and STAT-6, phosphorylation of the
insulin-related substrate 1 and cellular proliferation. Thus, homotypic
interactions of the IL-4R(alpha) subunit are sufficient for the initiation
and determination of ***IL*** - ***4*** -specific signaling events,
and such interactions may be integral to signaling through IL-4R
complexes.

L5 ANSWER 35 OF 82 MEDLINE
ACCESSION NUMBER: 97024821 MEDLINE
DOCUMENT NUMBER: 97024821
TITLE: Modulation of the human IgE response.
AUTHOR: de Vries J E; Yssel H
CORPORATE SOURCE: Human Immunology Dept, DNAX Research Institute for
Molecular and Cellular Biology, Palo Alto, CA, USA.
SOURCE: EUROPEAN RESPIRATORY JOURNAL. SUPPLEMENT, (1996 Aug) 22
58s-62s. Ref: 35
Journal code: ACK. ISSN: 0904-1850.
PUB. COUNTRY: Denmark
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199703
ENTRY WEEK: 19970304
AB Studies on the immunological basis of allergic diseases have indicated
that enhanced production of the cytokines interleukin (***IL***)-
4 and IL-13 and the reduced production of interferon-gamma
(IFN-gamma) by allergen-specific T-cells contribute to enhanced
immunoglobulin E (IgE) synthesis and the development of allergic disease
in certain individuals. Therefore, inhibition of ***IL*** - ***4***
and IL-13 synthesis or blocking of activities of these cytokines would be

one approach to inhibiting IgE production. In the present communication,
novel approaches toward this goal are discussed. It is shown that an
IL - ***4*** mutant protein, in which the tyrosine residue at
position 124 is replaced by aspartic acid (***IL*** - ***4***
,Y124D), binds with high affinity to the ***IL*** - ***4***
receptor, without receptor activation. ***IL*** - ***4*** ,Y124D acts
as a potent antagonist both of ***IL*** - ***4*** and IL-13 activity
in vitro, and inhibits immunoglobulin G4 (IgG4) and IgE production induced
by these cytokines. These data are compatible with the notion that the
IL - ***4*** and ***IL*** - ***13*** ***receptors***
are complex receptors, which share a common component, which is required
for signal transduction. In addition, it has been demonstrated that
allergen-specific T-cells, belonging to the T-helper 2 (Th2) subset can be
rendered anergic after incubation with allergen-derived peptides
representing minimal T-cell activation inducing epitopes. These anergic
Th2 cells failed to produce ***IL*** - ***4*** and IL-13, and failed
to proliferate after activation with allergen and antigen-presenting cells
(APC). The anergized T cells also failed to give B-cells help in IgE
synthesis, although they expressed normal levels of the CD40 ligand
(CD40L). Exogenous ***IL*** - ***4*** and IL-13 failed to restore
IgE synthesis, indicating that in addition to CD40L other co-stimulatory
signals are required for productive T-cell/B-cell interactions, resulting
in IgE synthesis. IgE production was restored by exogenous IL-2,
demonstrating that IL-2 reverses the nonresponsive state and helper
function of these nonresponsive T-cells. It is tempting to speculate that
induction of T-cell nonresponsiveness by allergen-derived peptides may
represent the underlying mechanisms for successful immunotherapy in
allergenic patients.

L5 ANSWER 36 OF 82 MEDLINE
ACCESSION NUMBER: 97017071 MEDLINE
DOCUMENT NUMBER: 97017071
TITLE: Biochemical and morphological characterization of vascular
and lymphocytic interleukin-4 receptors.
AUTHOR: Schnyder B; Lugli S M; Schnyder-Candrian S; Eng V M; Moser
R; Banchereau J; Ryffel B; Car B D
CORPORATE SOURCE: Institute of Toxicology, Swiss Federal Institute of
Technology-ETH, Schwerzenbach, Switzerland.
SOURCE: AMERICAN JOURNAL OF PATHOLOGY, (1996 Oct) 149 (4) 1369-79.
Journal code: 3RS. ISSN: 0002-9440.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals; Cancer
Journals
ENTRY MONTH: 199702
AB The distribution of the interleukin (***IL***)-***4*** receptor in
normal human and common marmoset (Callithrix jacchus) tissues was examined
by immunofluorescence and flow cytometry using monoclonal antibodies
specific for the human ***IL*** - ***4*** receptor to gain further
insight into ***IL*** - ***4*** -mediated inflammatory and
immunological events. ***IL*** - ***4*** receptor positivity was
unequivocally demonstrated on lymphocytes, predominantly T cells, and on
blood vessels in many tissues. Vascular ***IL*** - ***4*** receptor
immunofluorescence consisted of a strong smooth muscle cell positivity and
weaker positive staining of capillary and venular endothelial cells.
Subnanomolar concentrations of ***IL*** - ***4*** induced a
genistein-sensitive up-regulation of VCAM-1 in vascular cell cultures.
Tumor necrosis factor-alpha induced a genistein-resistant up-regulation of
VCAM-1. ***IL*** - ***4*** strongly induced expression of the
IL - ***4*** receptor on splenocytes (T lymphocytes) but not on
vascular smooth muscle or endothelial cell cultures. Receptor
cross-linking to [125I] ***IL*** - ***4*** revealed a 65- to 75-kDa
accessory receptor subunit consistent with a recently cloned ***IL*** -
13 ***receptor*** associated with the ***IL*** - ***4***
receptor on both vascular endothelial and smooth muscle cells. The
demonstration of a vascular distribution pattern for the ***IL*** -
4 receptor in addition to expression on lymphocytes suggests that
vascular functional alterations, transduced through a unique ***IL*** -
4 receptor complex (the type II ***IL*** - ***4***
receptor), may be of importance during immunological and allergic
inflammatory events.

L5 ANSWER 37 OF 82 MEDLINE
ACCESSION NUMBER: 96417475 MEDLINE
DOCUMENT NUMBER: 96417475
TITLE: ***IL*** - ***4*** and ***IL*** - ***13***
receptors : are they one and the same?.
AUTHOR: Callard R E; Matthews D J; Hibbert L
CORPORATE SOURCE: Immunobiology Unit, Institute of Child Health, London, UK..
rcallard@ICH.BPMF.AC.UK
SOURCE: IMMUNOLOGY TODAY, (1996 Mar) 17 (3) 108-10. Ref: 33
Journal code: AEA. ISSN: 0167-5699.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
ENTRY MONTH: 199702
AB Interleukin 4 (***IL*** - ***4***) and IL-13 share several
biological properties, suggesting that they also share a common receptor
or receptor component. Indeed, as discussed here by Robin Callard and
colleagues, the ***IL*** - ***13*** ***receptor*** appears to be
a functional receptor for ***IL*** - ***4*** .

L5 ANSWER 38 OF 82 MEDLINE
ACCESSION NUMBER: 96397528 MEDLINE
DOCUMENT NUMBER: 96397528
TITLE: ***IL4*** and ***IL13*** ***receptors*** share
the gamma c chain and activate STAT6, STAT3 and STAT5
proteins in normal human B cells.
AUTHOR: Rolling C; Treton D; Pellegrini S; Galanaud P; Richard Y
CORPORATE SOURCE: INSERM U131, Institut Paris-Sud sur les Cytokines, Clamart,
France.
SOURCE: FEBS LETTERS, (1996 Sep 9) 393 (1) 53-6.
Journal code: EUH. ISSN: 0014-5793.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199701
AB IL13 induces the same biological effects as ***IL4*** in normal human
B cells. We show that as in the IL4R complex, both IL4R alpha and IL2R
gamma c are components of the IL13R and that both cytokines induced STAT6,
STAT3 and STAT5 activation in B cells. In spite of this similar downstream
signalling, ***IL4*** and IL13 used a different set of Janus kinases:
IL13 is unable to activate JAK1 and JAK3.

L5 ANSWER 39 OF 82 MEDLINE
ACCESSION NUMBER: 96357185 MEDLINE
DOCUMENT NUMBER: 96357185
TITLE: Inhibition of proliferation and clonal growth of human
breast cancer cells by interleukin 13.
AUTHOR: Serve H; Oelmann E; Herweg A; Oberberg D; Serve S; Reufi B;
Mucke C; Minty A; Thiel E; Berdel W E
CORPORATE SOURCE: Department of Hematology and Oncology,
Universitaetsklinikum Benjamin Franklin, Freie Universitaet, Hindenburgdamm, Berlin, Germany.
SOURCE: CANCER RESEARCH, (1996 Aug 1) 56 (15) 3583-8.
Journal code: CNF. ISSN: 0008-5472.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199612
AB We tested the influence of recombinant human interleukin (rhIL)-l3 and
rhIL-4 on clonal growth of human breast cancer cell lines. rhIL-13 and
rhIL-4 inhibited clonal growth of three of nine lines to approximately 50%
of controls (ED50, 0.5 ng/ml). rhIl-13 reduced [3H]thymidine incorporation
in all three cell lines: two showing a minor (84% and 83% of controls) and
one showing a major response (25% of control). Both cytokines markedly
reduced serum-induced G(0/1) exit (approximately 25% versus 60%).
125I-labeled interleukin (IL) 13 binding assays revealed high-affinity
binding sites for IL-13 on two of the three responding cell lines (KD
approximately 60 pM). (Y124D) ***IL*** - ***4*** effectively
antagonized all effects of rhIl-13 and rhIL-4, arguing for shared receptor
components between them. However, neither rhIl-4 nor (Y124D) ***IL*** -
4 could displace 125I-labeled IL-13 from binding, although
unlabeled rhIL-13 effectively did so. Using reverse transcription-PCR, we
studied the expression of the common gamma chain (gammac) in responding
cell lines, putatively being shared between ***IL*** - ***4***
receptor and ***IL*** - ***13*** ***receptor*** ; none of the
three cell lines express gammac. In conclusion, we demonstrate
antiproliferative effects of ***IL*** - ***4*** and IL-13 on
carcinoma cells which express IL-13 binding sites without participation of
gammac.

L5 ANSWER 40 OF 82 MEDLINE
ACCESSION NUMBER: 96343858 MEDLINE
DOCUMENT NUMBER: 96343858
TITLE: Differentiation and stability of T helper 1 and 2 cells
derived from naive human neonatal CD4+ T cells, analyzed at
the single-cell level.
AUTHOR: Sornasse T; Larenas P V; Davis K A; de Vries J E; Yssel H
CORPORATE SOURCE: Department of Human Immunology, DNAX Research Institute,
Palo Alto, California 94304, USA.
SOURCE: JOURNAL OF EXPERIMENTAL MEDICINE, (1996 Aug 1) 184 (2)
473-83.
Journal code: I2V. ISSN: 0022-1007.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199611
AB The development of CD4+ T helper (Th) type 1 and 2 cells is essential for
the eradication of pathogens, but can also be responsible for various
pathological disorders. Therefore, modulation of Th cell differentiation
may have clinical utility in the treatment of human disease. Here, we show
that interleukin (IL) 12 and ***IL*** - ***4*** directly induce
human neonatal CD4- T cells, activated via CD3 and CD28, to differentiate
into Th1 and Th2 subsets. In contrast, IL-13, which shares many biological
activities with ***IL*** - ***4*** , failed to induce T cell
differentiation, consistent with the observation that human T cells do not
express ***IL*** - ***13*** ***receptors*** . Both the
IL-12-induced Th1 subset and the ***IL*** - ***4*** -induced Th2
subset produce large quantities of IL-10, confirming that human IL-10 is

not a typical human Th2 cytokine. Interestingly, ***IL*** - ***4***
-driven Th2 cell differentiation was completely prevented by an ***IL***
- ***4*** mutant protein (***IL*** - ***4*** .Y124D), indicating
that this molecule acts as a strong ***IL*** - ***4*** receptor
antagonist. Analysis of single T cells producing interferon gamma or
IL - ***4*** revealed that induction of Th1 cell differentiation
occurred rapidly and required only 4 d of priming of the neonatal CD4+ T
cells in the presence of IL-12. The IL-12-induced Th1 cell phenotype was
stable and was not significantly affected when repeatedly stimulated in
the presence of recombinant ***IL*** - ***4*** . In contrast, the
differentiation of Th2 cells occurred slowly and required not only 6 d of
priming, but also additional restimulation of the primed CD4+ T cells in
the presence of ***IL*** - ***4*** . Moreover, ***IL*** - ***4***
-induced Th2 cell phenotypes were not stable and could rapidly be reverted
into a population predominantly containing Th0 and Th1 cells, after a
single restimulation in the presence of IL-12. The observed differences in
stability of IL-12- and ***IL*** - ***4*** -induced human Th1 and Th2
subsets, respectively, may have implications for cytokine-based therapies
of chronic disease.

L5 ANSWER 41 OF 82 MEDLINE
ACCESSION NUMBER: 96303258 MEDLINE
DOCUMENT NUMBER: 96303258
TITLE: RU 41 740 (Biostim) and ***IL*** - ***4*** , or IL-13,
have opposite effects on CD14, CD23, HLA-DR and HLA-DQ on
monocytes.
AUTHOR: Garin L; Bernaud J; Picot N; Salvi M; Corallo F; Bloy C;
Rigal D
CORPORATE SOURCE: Laboratoire d'Immunologie, Centre Regional de Transfusion
Sanguine de Lyon, France.
SOURCE: INTERNATIONAL JOURNAL OF IMMUNOPHARMACOLOGY, (1996 Jan) 18
(1) 69-74.
Journal code: GRI. ISSN: 0192-0561.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199704
ENTRY WEEK: 19970401
AB RU 41 740 (Biostim) is a glycoprotein extract obtained from Klebsiella
pneumoniae. Its immunostimulating properties on monocytes have been
established in vivo and in vitro. To confirm its spectrum of action at
molecular level we studied its role on the modulation of four molecules
involved in antigen presentation (HLA-DR, HLA-DQ), uptake of endotoxin
(CD14) and activation (CD23). These four molecules are known to be
modulated by interleukins ***IL*** - ***4*** and IL-13. We found
that HLA-DR, HLA-DQ, CD14 and CD23 were differentially regulated by
biostim and ***IL*** - ***4*** or IL-13. Surprisingly, Biostim
inhibited the ***IL*** - ***4*** or IL-13-induced expression of
CD23, HLA-DQ and HLA-DR, while it did not have any action on these
molecules by itself. We therefore hypothesize that Biostim, through the
action on its receptor, could interact with the ***IL*** - ***4***
receptor and ***IL*** - ***13*** ***receptor*** and/or inhibit
the ***IL*** - ***4*** and ***IL*** - ***13*** ***receptor*** transducing signal.

L5 ANSWER 42 OF 82 MEDLINE
ACCESSION NUMBER: 96151984 MEDLINE
DOCUMENT NUMBER: 96151984
TITLE: Interleukin-13 inhibits interleukin-2-induced proliferation
and protects chronic lymphocytic leukemia B cells from in
vitro apoptosis.
AUTHOR: Chaouchi N; Wallon C; Goujard C; Tertian G; Rudent A; Caput
D; Ferrera P; Minty A; Vazquez A; Delfraissy J F
CORPORATE SOURCE: Laboratoire Virus Neurone et Immunite, Faculte de Medecine
Paris Sud, France.
SOURCE: BLOOD, (1996 Feb 1) 87 (3) 1022-9.
Journal code: A8G. ISSN: 0006-4971.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals; Cancer
Journals
ENTRY MONTH: 199605
AB Human interleukin-13 (IL-13) acts at different stages of the normal B-cell
maturation pathway with a spectrum of biologic activities overlapping
those of ***IL*** - ***4*** . B chronic lymphocytic leukemia (B-CLL)
is characterized by the accumulation of slow-dividing and long-lived
monoclonal B cells, arrested at the intermediate stage of their
. differentiation. In vitro, B-CLL cells exhibit a spontaneous apoptosis
regulated by different cytokines. In this report, we show that IL-13 (10
to 200 ng/mL) acts directly on monoclonal B-CLL cells from 12 patients.
(1) IL-13 enhances CD23 expression and induces soluble CD23 secretion by
B-CLL cells but does not exhibit a growth factor activity. (2) IL-13
inhibits IL-2 responsiveness of B-CLL cells, activated either with IL-2
alone or through crosslinking of Igs or ligation of CD40 antigen. (3)
IL-13 protects B-CLL cells from in vitro spontaneous apoptosis. The
effects of IL-13 on neoplasic B cells were slightly less than those of
IL - ***4*** and occurred independently of the presence of
IL - ***4*** . The present observations show that IL-13 may
exhibit a negative regulatory effect on neoplasic B cells in contrast with
that observed in normal B cells, and suggest that IL-13 could be an
important factor in the pathogenesis of CLL by preventing the death of
monoclonal B cells. Moreover, B-CLL may be an interesting model to study
the regulation of the expression of ***IL*** - ***13*** ***receptor*** and/or signal transduction pathways.

L5 ANSWER 43 OF 82 MEDLINE
ACCESSION NUMBER: 96133964 MEDLINE
DOCUMENT NUMBER: 96133964
TITLE: Cloning and characterization of a binding subunit of the
interleukin 13 receptor that is also a component of the
interleukin 4 receptor.
AUTHOR: Hilton D J; Zhang J G; Metcalf D; Alexander W S; Nicola N
A; Willson T A
CORPORATE SOURCE: Walter and Eliza Hall Institute of Medical Research, Royal
Melbourne Hospital, Victoria, Australia.
CONTRACT NUMBER: CA-22556 (NCI)
SOURCE: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE
UNITED STATES OF AMERICA, (1996 Jan 9) 93 (1) 497-501.
Journal code: PV3. ISSN: 0027-8424.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
OTHER SOURCE: GENBANK-S80963
ENTRY MONTH: 199604
AB Interleukins 4 (***IL*** - ***4***) and 13 (IL-13) have been found
previously to share receptor components on some cells, as revealed by
receptor cross-competition studies. In the present study, the cloning is
described of murine NR4, a previously unrecognized receptor identified on
the basis of sequence similarity with members of the hemopoietin receptor
family. mRNA encoding NR4 was found in a wide range of murine cells and
tissues. By using transient expression in COS-7 cells, NR4 was found to
encode the ***IL*** - ***13*** ***receptor*** alpha chain, a
low-affinity receptor capable of binding IL-13 but not ***IL*** -
4 or interleukins 2, -7, -9, or -15. Stable expression of the
IL - ***13*** ***receptor*** alpha chain (NR4) in CTLL-2
cells resulted in the generation of high-affinity ***IL*** - ***13***
receptors capable of transducing a proliferative signal in
response to IL-13 and, moreover, led to competitive cross-reactivity in
the binding of ***IL*** - ***4*** and IL-13. These results suggest
that the ***IL*** - ***13*** ***receptor*** alpha chain (NR4) is
the primary binding subunit of the ***IL*** - ***13*** ***receptor*** and may also be a component of ***IL*** - ***4***
receptors.

L5 ANSWER 44 OF 82 MEDLINE
ACCESSION NUMBER: 96082177 MEDLINE
DOCUMENT NUMBER: 96082177
TITLE: The insulin receptor substrate-1-related 4PS substrate but
not the interleukin-2R gamma chain is involved in
interleukin-13-mediated signal transduction.
AUTHOR: Wang L M; Michieli P; Lie W R; Liu F; Lee C C; Minty A; Sun
X J; Levine A; White M F; Pierce J H
CORPORATE SOURCE: Laboratory of Cellular and Molecular Biology, National
Institutes of Health, Bethesda, MD 20892-4255, USA.
SOURCE: BLOOD, (1995 Dec 1) 86 (11) 4218-27.
Journal code: A8G. ISSN: 0006-4971.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals; Cancer
Journals
ENTRY MONTH: 199603
AB Interleukin-13 (IL-13) induced a potent mitogenic response in
IL-3-dependent TF-1 cells and DNA synthesis to a lesser extent in MO7E and
FDC-P1 cells. IL-13 stimulation of these lines, like ***IL*** -
4 and insulin-like growth factor-1 (IGF-1), resulted in tyrosine
phosphorylation of a 170-kD substrate. The tyrosine-phosphorylated 170-kD
substrate strongly associated with the 85-kD subunit of phosphoinositol-3
(PI-3) kinase and with Grb-2. Anti-4PS serum readily detected the 170-kD
substrate in lysates from both TF-1 and FDC-P1 cells stimulated with IL-13
or ***IL*** - ***4*** . These data provide evidence that IL-13
induces tyrosine phosphorylation of the 4PS substrate, providing an
essential interface between the ***IL*** - ***13*** ***receptor***
and signaling molecules containing SH2 domains. IL-13 and ***IL*** -
4 stimulation of murine L cell fibroblasts, which endogenously
express the ***IL*** - ***4*** receptor (IL-4R alpha) and lack
expression of the IL-2 receptor gamma subunit (IL-2R gamma), resulted in
tyrosine phosphorylation of insulin receptor substrate-1 (IRS-1)/4PS.
Enhanced tyrosine phosphorylation of IRS-1/4PS was observed in response to
IL - ***4*** , but not IL-13 treatment of L cells transfected
with the IL-2R gamma chain. These results indicate that IL-13 does not use
the IL-2R gamma subunit in its receptor complex and that expression of
IL-2R gamma enhances, but is not absolutely required for mediating
IL - ***4*** -induced tyrosine phosphorylation of IRS-1/4PS.

L5 ANSWER 45 OF 82 MEDLINE
ACCESSION NUMBER: 96025882 MEDLINE
DOCUMENT NUMBER: 96025882
TITLE: ***IL*** - ***4*** induces germ-line IgE heavy chain
gene transcription in human fetal pre-B cells. Evidence for
differential expression of functional ***IL*** - ***4*** and ***IL*** - ***13*** ***receptors***

during B cell ontogeny.
AUTHOR: Punnonen J; Cocks B G; de Vries J E
CORPORATE SOURCE: DNAX Research Institute of Molecular and Cellular Biology,
Human Immunology Department, Palo Alto, CA 94304, USA.
SOURCE: JOURNAL OF IMMUNOLOGY, (1995 Nov 1) 155 (9) 4248-54.
Journal code: IFB. ISSN: 0022-1767.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals; Cancer
Journals
ENTRY MONTH: 199602
AB The present study demonstrates that ***IL*** - ***4*** induces
germ-line IgE heavy chain (epsilon) gene transcription in human fetal
splenic mononuclear cells; fetal bone marrow cells; highly purified sorted
surface (s) mu+, CD10+, CD19+ immature B cells; and s mu-, cytoplasmic
mu+, CD10+, CD19+ pre-B cells derived from human fetal bone marrow.
Similar to observations in normal adult B cells, TGF-beta and IFN-gamma
inhibited ***IL*** - ***4*** -induced germ-line epsilon RNA synthesis
in fetal pre-B cells, whereas anti-CD40 mAbs and TNF-alpha had enhancing
effects, suggesting that the general mechanisms regulating germ-line
epsilon transcription in adult B cells and pre-B cells are similar. IL-13
also induced germ-line epsilon RNA synthesis in s mu+, CD10+, CD19+
immature B cells, but the level of transcription induced by IL-13 was
significantly less than that induced by ***IL*** - ***4*** .
Anti-CD40 mAbs strongly synergized with both ***IL*** - ***4*** and
IL-13 in inducing germ-line epsilon RNA synthesis by fetal immature B
cells. Interestingly, IL-13 failed to induce germ-line epsilon RNA
synthesis in s mu- pre-B cells even in the presence of anti-CD40 mAbs.
These distinct effects of ***IL*** - ***4*** and IL-13 suggest that
functional IL-13R are expressed at a later stage of B cell ontogeny than
IL-4R, and that IL-13, in contrast to ***IL*** - ***4*** , does not
regulate pre-B cell differentiation. Given the fact that ***IL*** -
4 production appears to be enhanced in atopic individuals, the
capacity of ***IL*** - ***4*** to induce germ-line epsilon
transcription in human fetal immature B cells and pre-B cells suggests
that commitment of B cell precursors to IgE-producing cells may occur
during intrauterine life and may explain the increased IgE production in
neonates with a family history of atopy.

L5 ANSWER 46 OF 82 MEDLINE
ACCESSION NUMBER: 96025871 MEDLINE
DOCUMENT NUMBER: 96025871
TITLE: ***IL*** - ***4*** induces human B cell maturation
and IgE synthesis in SCID-hu mice. Inhibition of ongoing
IgE production by in vivo treatment with an ***IL*** -
4 / ***IL*** - ***13*** ***receptor***
antagonist.
AUTHOR: Carballido J M; Schols D; Namikawa R; Zurawski S; Zurawski
G; Roncarolo M G; de Vries J E
CORPORATE SOURCE: Department of Human Immunology, DNAX Research Institute,
Palo Alto, CA 94304, USA.
SOURCE: JOURNAL OF IMMUNOLOGY, (1995 Nov 1) 155 (9) 4162-70.
Journal code: IFB. ISSN: 0022-1767.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals; Cancer
Journals
ENTRY MONTH: 199602
AB The effect of cytokine treatment on the in vivo maturation and Ig isotype
switching of human B cells was studied in a modified SCID-hu mouse model.
SCID mice, subcutaneously cotransplanted with small fragments of fetal
human thymus and bone (SCID-hu BM/T mice) generated all human leukocyte
lineages including T and B lymphocytes, macrophages, and granulocytes. All
SCID-hu BM/T mice spontaneously produced human IgM and IgG, whereas IgE
and IgA were detected in 37 and 80% of the mice, respectively, indicating
that productive human T-B cell interactions resulting in Ig isotype
switching occur in these mice. Administration of ***IL*** - ***4***
to SCID-hu BM/T mice enhanced human B cell maturation, as judged by the
increase in the percentages of CD45+, CD19+ bone marrow B cells expressing
CD20, CD23, CD40, sIgM, and sIgD. Furthermore, these cells were also
functionally more mature because they spontaneously produced human
IgG/IgG4 in vitro and could be induced to secrete human IgE by addition of
anti-CD40 mAb alone. In contrast, B cells isolated from PBS-treated mice
only produced significant Ig levels after stimulation with anti-CD40 mAb
in the presence of exogenous ***IL*** - ***4*** . ***IL*** -
4 administration also induced human IgE synthesis in 44% of the
mice, which had no serum IgE before treatment. More importantly, ongoing
human IgE synthesis in SCID-hu BM/T mice was suppressed by > 90% following
administration of an ***IL*** - ***4*** mutant protein, which acts
as an ***IL*** - ***4*** and ***IL*** - ***13***
receptor antagonist. These results suggest that ***IL*** -
4 / ***IL*** - ***13*** ***receptor*** antagonists have
potential clinical utility in treating human atopic diseases associated
with enhanced IgE production.

L5 ANSWER 47 OF 82 MEDLINE
ACCESSION NUMBER: 95339858 MEDLINE
DOCUMENT NUMBER: 95339858
TITLE: Involvement of interleukin (IL)-13, but not ***IL*** -
4 , in spontaneous IgE and IgG4 production in
nephrotic syndrome.
AUTHOR: Kimata H; Fujimoto M; Furusho K
CORPORATE SOURCE: Department of Pediatrics, Kyoto University Hospital,
Japan..
SOURCE: EUROPEAN JOURNAL OF IMMUNOLOGY, (1995 Jun) 25 (6) 1497-501.
Journal code: EN5. ISSN: 0014-2980.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199510
AB Nephrotic syndrome (NS) is a renal disease characterized by proteinuria
and hypoalbuminemia. In NS patients without any allergic disease, serum
IgE and IgG4 levels were selectively increased, and peripheral blood
mononuclear cells (MNC) spontaneously produced IgE and IgG4. T cells
produced interleukin (IL)-13 spontaneously, and B cells constitutively
expressed ***IL*** - ***13*** ***receptors*** (IL-13R). In
addition, T cells stimulated surface IgE-negative (sIgE-) and sIgG4- B
cells to produce IgE and IgG4, respectively, and IgE and IgG4 production
was specifically blocked by anti-IL-13 antibody (Ab). MNC from atopic
dermatitis (AD) patients also produced IgE and IgG4 spontaneously.
However, in AD patients, T cells spontaneously produced ***IL*** -
4 , but not IL-13, and B cells constitutively expressed IL-4R, but
not IL-13R. T cells stimulated sIgE- and sIgG4- B cells to produce IgE and
IgG4, respectively, and the production was specifically blocked by anti-
IL - ***4*** Ab. On the other hand, sIgE+ and sIgG4+ B cells
from both NS and AD patients spontaneously produced IgE and IgG4,
respectively, and this production was not affected by T cells, anti-
IL - ***4*** Ab, or anti-IL-13 Ab. These results indicate that
IL-13 is involved in the enhanced production of IgE and IgG4 in NS, while
IL - ***4*** is involved in these responses in AD.

L5 ANSWER 48 OF 82 MEDLINE
ACCESSION NUMBER: 95337763 MEDLINE
DOCUMENT NUMBER: 95337763
TITLE: Inhibition of human IgE synthesis in vitro and in SCID-hu
mice by an interleukin-4 receptor antagonist.
AUTHOR: Carballido J M; Aversa G; Schols D; Punnonen J; de Vries J
E
CORPORATE SOURCE: Human Immunology Department, DNAX Research Institute of
Molecular and Cellular Biology, Palo Alto, CA 94304-1104,
USA.
SOURCE: INTERNATIONAL ARCHIVES OF ALLERGY AND IMMUNOLOGY, (1995
May-Jun) 107 (1-3) 304-7.
Journal code: BJ7. ISSN: 1018-2438.
PUB. COUNTRY: Switzerland
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199510
AB In the present study, it is shown that a human interleukin (***IL***)-
4 mutant protein (***IL*** - ***4*** .Y124D) acts as a potent
IL - ***4*** and ***IL*** - ***13*** ***receptor***
antagonist. Human (h) ***IL*** - ***4*** .Y124D efficiently inhibits
both ***IL*** - ***4*** - and IL-13-induced IgE production in vitro.
In addition, hIL-4.Y124D strongly inhibits ongoing human IgE synthesis in
SCID-hu mice. These inhibitory effects are specific, since human IgG
levels were not significantly affected. These results confirm the notion
that the ***IL*** - ***4*** and ***IL*** - ***13***
receptor share a common component, which is required for signal
transduction. In addition, they show that relatively large antagonistic
polypeptides, such as hIL-4.Y124D have potential clinical utility in
reducing IgE-mediated allergic diseases.

L5 ANSWER 49 OF 82 MEDLINE
ACCESSION NUMBER: 95325632 MEDLINE
DOCUMENT NUMBER: 95325632
TITLE: The IL-2 receptor gamma c chain does not function as a
subunit shared by the ***IL*** - ***4*** and
IL - ***13*** ***receptors*** . Implication
for the structure of the ***IL*** - ***4*** receptor.
AUTHOR: He Y W; Malek T R
CORPORATE SOURCE: Department of Microbiology and Immunology, University of
Miami School of Medicine, FL 33136, USA.
CONTRACT NUMBER: 1R01-CA45957 (NCI)
SOURCE: JOURNAL OF IMMUNOLOGY, (1995 Jul 1) 155 (1) 9-12.
Journal code: IFB. ISSN: 0022-1767.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals; Cancer
Journals
ENTRY MONTH: 199510
AB The IL-2 receptor (IL-2R) gamma c subunit is also a component of the
receptors for ***IL*** - ***4*** , IL-7, IL-9, and IL-15. The IL-4R
and IL-13R appear to share a common subunit, and gamma c was proposed to
be this shared subunit. In this study, we have assessed the relative
contribution of gamma c to the mouse IL-4R and IL-13R. The MC/9 mast cell
line constitutively expresses gamma c and proliferates to ***IL*** -
4 and IL-13, but only the response to ***IL*** - ***4*** was

blocked by anti-gamma c mAbs. After transfection of the ***IL*** - ***4*** - and IL-13-responsive gamma c-negative B9 plasmacytoma with full length (m gamma) or cytoplasmic-tailless gamma c cDNA (m gamma t), only the proliferative response to ***IL*** - ***4*** was affected by the surface expression of these gamma c molecules. The inability of m gamma or m gamma t expression to affect IL-13-induced proliferation by B9 indicates that gamma c does not obviously contribute to the IL-13R and does not function as the shared subunit of the IL-4R and IL-13R. This study suggests that there are two distinct IL-4R, one of which is independent of gamma c.

L5 ANSWER 50 OF 82 MEDLINE
ACCESSION NUMBER: 95263584 MEDLINE
DOCUMENT NUMBER: 95263584
TITLE: Interleukin-13 signal transduction in lymphohemopoietic cells. Similarities and differences in signal transduction with interleukin-4 and insulin.
AUTHOR: Welham M J; Learmonth L; Bone H; Schrader J W
CORPORATE SOURCE: Biomedical Research Centre, University of British Columbia, Vancouver, Canada.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1995 May 19) 270 (20) 12286-96.
Journal code: HIV. ISSN: 0021-9258.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199508
AB Interleukin-13 (IL-13) and interleukin-4 (***IL*** - ***4***) are related in structure and function and are thought to share a common receptor component. We have investigated the signal transduction pathways activated by these two growth factors, as well as insulin, in cell-lines and primary cells of lymphohemopoietic origin. All three factors induced the tyrosine phosphorylation of a protein of 170 kDa (p170), which coimmunoprecipitated with the p85 subunit of P13'-kinase, via high affinity interactions mediated by the SH2 domains of p85. Antibodies raised against the entire insulin-receptor substrate-1 (IRS-1) protein immunoprecipitated p170 much less efficiently than they did IRS-1 from 3T3 cells. However, antibodies directed against the conserved pleckstrin homology domain of IRS-1 immunoprecipitated both p170 and IRS-I with similar efficiency, suggesting they share structural similarities in this region. In lymphohemopoietic cells, IL-13, ***IL*** - ***4*** , and insulin failed to induce increased tyrosine phosphorylation of Shc, or its association with grb2, modification of Sos1, or activation of erk-1 and erk-2 mitogen-activated protein kinases, suggesting that p170 mediates downstream pathways distinct from those mediated by IRS-1. Both IL-13 and ***IL*** - ***4*** induced low levels of tyrosine phosphorylation of Tyk-2 and Jak-1. ***IL*** - ***4*** also activated the Jak-3-kinase, but, despite other similarities, IL-13 did not. Insulin failed to activate any of the known members of the Janus family of kinases. In that Jak-3 is reported to associate with the IL-2 gamma c chain, these data suggest that the ***IL*** - ***13*** ***receptor*** does not utilize this subunit. However, both IL-13 and ***IL*** - ***4*** induced tyrosine phosphorylation of the ***IL*** - ***4*** -140 kDa receptor chain, suggesting that this is a component of both receptors in these cells and accounts for the similarities in signaling pathways shared by IL-13 and ***IL*** - ***4*** .

L5 ANSWER 51 OF 82 MEDLINE
ACCESSION NUMBER: 95238374 MEDLINE
DOCUMENT NUMBER: 95238374
TITLE: Receptor for interleukin 13. Interaction with interleukin 4 by a mechanism that does not involve the common gamma chain shared by receptors for interleukins 2, 4, 7, 9, and 15.
AUTHOR: Obiri N I; Debinski W; Leonard W J; Puri R K
CORPORATE SOURCE: Laboratory of Molecular Tumor Biology, Food and Drug Administration, Bethesda, Maryland 20892, USA.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1995 Apr 14) 270 (15) 8797-804.
Journal code: HIV. ISSN: 0021-9258.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199507
AB Interleukin 13 (IL-13) shares many biological properties with ***IL*** - ***4*** , and although the receptor for ***IL*** - ***4*** (IL-4R) has been characterized, the expression and structure of ***IL*** - ***13*** ***receptor*** are unknown. We report here that human renal cell carcinoma (RCC) cells express large numbers of functional IL-13R. Human B lymphocytes and monocytes expressed a very small number of IL-13R, while resting or activated human T cells expressed little or no IL-13R. ***IL*** - ***4*** did not compete for IL-13 binding, while IL-13 competed for ***IL*** - ***4*** binding, even though IL-4R and IL-13R are structurally distinct on human RCC cells. IL-13 cross-linked with one major protein that is similar in size to the gamma c subunit of IL-2, -4, -7, -9, and -15 receptors but was not recognized by anti-gamma c or anti-IL-4R antibodies. ***IL*** - ***4*** , on the other hand, cross-linked with two major proteins, the smaller of which appears to be similar in size to IL-13R and gamma c, but (like the IL-13R) it did not react with anti-gamma c antibody. Although as shown in this study and in previous studies, gamma c is a functional component of IL-4R in lymphoid cells, it does not appear to be associated with IL-4R on RCC cells. Even in the absence of common gamma chain ***IL*** - ***4*** and IL-13 were able to up-regulate intracellular adhesion molecule-I antigen on RCC cells. These data suggest that the interaction of IL-13 with IL-4R does not involve gamma c and IL-13R itself may be a novel subunit of the IL-4R.

L5 ANSWER 52 OF 82 MEDLINE
ACCESSION NUMBER: 95188408 MEDLINE
DOCUMENT NUMBER: 95188408
TITLE: Regulatory effects of IL-13 on synovial fluid macrophages and blood monocytes from patients with inflammatory arthritis.
AUTHOR: Hart P H; Ahern M J; Smith M D; Finlay-Jones J J
CORPORATE SOURCE: Department of Microbiology and Infectious Diseases, School of Medicine, Flinders University of South Australia, Adelaide..
SOURCE: CLINICAL AND EXPERIMENTAL IMMUNOLOGY, (1995 Mar) 99 (3) 331-7.
Journal code: DD7. ISSN: 0009-9104.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199506
AB Activated macrophages are central to the destructive processes of chronic inflammatory arthritis. In this study, it was hypothesized that IL-13, a product predominantly of 'Th2-type' lymphocytes, may be used therapeutically to down-regulate monocyte/macrophage activities at sites of chronic inflammation. Synovial fluid mononuclear cells were isolated from 12 patients with chronic inflammatory arthritis. Peripheral blood mononuclear cells (PBMC) were isolated at the same time as synovial fluid cells from all 12 patients. IL-13 significantly inhibited lipopolysaccharide (LPS)-induced tumour necrosis factor-alpha (TNF-alpha) production by mononuclear cells from peripheral blood, but not synovial fluid. In contrast, IL-13 inhibited LPS-induced IL-1 beta production by all cells, and as a positive response to IL-13, CD23 expression was increased on both cell populations. Blood monocytes cultured for 7 days with granulocyte-macrophage colony-stimulating factor (GM-CSF) or M-CSF responded to IL-13 in a manner similar to that detected for synovial fluid-derived cells, with suppression of LPS-induced IL-1 beta, but not TNF-alpha, production. In all experiments, the responses to IL-13 were very similar to those detected to ***IL*** - ***4*** , but differed from those measured with IL-10. Thus, the responses to IL-13 by synovial fluid cells and cultured monocytes are not equal to those of blood monocytes. The similar responses to ***IL*** - ***4*** and IL-13 support claims of a common element for signalling from the ***IL*** - ***4*** and ***IL*** - ***13*** ***receptors*** . Furthermore, the activity of a common receptor chain may be altered by monocyte activation and differentiation.

L5 ANSWER 53 OF 82 MEDLINE
ACCESSION NUMBER: 95181299 MEDLINE
DOCUMENT NUMBER: 95181299
TITLE: Characterization and comparison of the interleukin 13 receptor with the interleukin 4 receptor on several cell types.
AUTHOR: Vita N; Lefort S; Laurent P; Caput D; Ferrara P
CORPORATE SOURCE: Sanofi Recherche, Labège, France.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1995 Feb 24) 270 (8) 3512-7.
Journal code: HIV. ISSN: 0021-9258.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199506
AB We describe here the characterization of the interleukin (***IL***) ***13*** ***receptor*** and a comparison with the ***IL*** - ***4*** receptor on different cell types. Several, but not all, of the ***IL*** - ***4*** receptor-positive cells showed specific IL-13 binding, which was always completely displaced by ***IL*** - ***4*** . In the ***IL*** - ***13*** ***receptor*** -positive cells, the IL-13 either completely or partially displaced the labeled ***IL*** - ***4*** . Further characterization of the ***IL*** - ***13*** ***receptor*** in two cell lines, COS-3 and A431, representative of the groups of complete and partial displacement of ***IL*** - ***4*** by IL-13, respectively, showed that the IL-13 binds with high affinity (Kd approximately 300 pM) to both cells and that the number of binding sites is, in COS-3 cells, equivalent to that for ***IL*** - ***4*** and, in A431 cells, is smaller than that for ***IL*** - ***4*** . Cross-linking of labeled IL-13 yielded, on COS-3 cells, two affinity-labeled complexes of 220 and 70 kDa, and on A431 cells, one complex of 70 kDa; labeled ***IL*** - ***4*** yielded on both cells the same pattern of three complexes of 220, 145, and 70 kDa. Altogether, these results suggest that the ***IL*** - ***13*** ***receptor*** may be constituted by a subset of the ***IL*** - ***4*** receptor

complex associated with at least one additional protein.

L5 ANSWER 54 OF 82 MEDLINE
ACCESSION NUMBER: 95137668 MEDLINE
DOCUMENT NUMBER: 95137668
TITLE: IL-13 has only a subset of ***IL*** - ***4*** -like activities on B chronic lymphocytic leukaemia cells.
AUTHOR: Fluckiger A C; Bri`ere F; Zurawski G; Bridon J M; Banchereau J
CORPORATE SOURCE: Schering-Plough, Laboratory for Immunological Research, Dardilly, France..
SOURCE: IMMUNOLOGY, (1994 Nov) 83 (3) 397-403.
Journal code: GH7. ISSN: 0019-2805.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199505
AB The recently described interleukin-13 (IL-13) has been shown to share many of the effects of ***IL*** - ***4*** on normal B cells, including growth-promoting activity and induction of CD23. In this study, we compared the effects of IL-13 and ***IL*** - ***4*** on B chronic lymphocytic leukaemias (B-CLL) cells. After anti-CD40 activation, both IL-13 and ***IL*** - ***4*** promoted the DNA synthesis of B-CLL cells and increased the recovery of viable cells. The time kinetics of the proliferative response of B-CLL cells to IL-13 or ***IL*** - ***4*** were superimposable and showed the long-lasting effect of both cytokines. As on normal B cells, both ***IL*** - ***4*** and IL-13 synergized with IL-10 to enhance B-CLL DNA synthesis. Moreover, IL-13, like ***IL*** - ***4*** , was able to increase CD23 expression on anti-CD40-activated leukaemic B cells. The CD23 up-regulation and the DNA synthesis induced by IL-13 on anti-CD40-activated B-CLL cells, were significantly reduced when B-CLL cells were cultured with anti- ***IL*** - ***4*** receptor monoclonal antibody, suggesting a common pathway for IL-13 and ***IL*** - ***4*** signalling. However, after cross-linking of surface IgM, ***IL*** - ***4*** strongly inhibited the IL-2-induced DNA synthesis of B-CLL cells, whereas IL-13 did not inhibit IL-2-driven proliferation of anti-IgM-activated B-CLL cells. Furthermore, while ***IL*** - ***4*** strongly up-regulated the expression of CD23 on anti-IgM-activated leukaemic B cells, IL-13 only marginally increased it. Finally, IL-13, in contrast to ***IL*** - ***4*** , did not prevent the entry of B-CLL cells into apoptosis. Thus IL-13 and ***IL*** - ***4*** display comparable effects on anti-CD40-activated B-CLL cells, which are blocked by anti- ***IL*** - ***4*** receptor (IL-4R) monoclonal antibodies. However, IL-13-dependent effects are absent or inefficient in non-activated or anti-IgM-activated B-CLL cells. This suggests that such cells may lack functional ***IL*** - ***13*** ***receptors*** , though IL-13R and IL-4R on B-CLL cells share a common component.

L5 ANSWER 55 OF 82 MEDLINE
ACCESSION NUMBER: 94065589 MEDLINE
DOCUMENT NUMBER: 94065589
TITLE: An interleukin 4 (***IL*** - ***4***) mutant protein inhibits both ***IL*** - ***4*** or IL-13-induced human immunoglobulin G4 (IgG4) and IgE synthesis and B cell proliferation: support for a common component shared by ***IL*** - ***4*** and ***IL*** - ***13*** ***receptors*** .
AUTHOR: Aversa G; Punnonen J; Cocks B G; de Waal Malefyt R; Vega F Jr; Zurawski S M; Zurawski G; de Vries J E
CORPORATE SOURCE: Human Immunology Department, DNAX Research Institute, Palo Alto, California 94304-1104.
SOURCE: JOURNAL OF EXPERIMENTAL MEDICINE, (1993 Dec 1) 178 (6) 2213-8.
Journal code: I2V. ISSN: 0022-1007.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199403
AB Interleukin 4 (***IL*** - ***4***) and IL-13 share many biological functions. Both cytokines promote growth of activated human B cells and induce naive human surface immunoglobulin D+ (sIgD+) B cells to produce IgG4 and IgE. Here we show that a mutant form of human ***IL*** - ***4*** , in which the tyrosine residue at position 124 is replaced by aspartic acid (hIL-4.Y124D), specifically blocks ***IL*** - ***4*** and IL-13-induced proliferation of B cells costimulated by anti-CD40 mAbs in a dose-dependent fashion. A mouse mutant ***IL*** - ***4*** protein (mIL-4.Y119D), which antagonizes the biological activity of mouse ***IL*** - ***4*** , was ineffective. In addition, hIL-4.Y124D, at concentrations of up to 40 nM, did not affect IL-2-induced B cell proliferation. hIL-4.Y124D did not have detectable agonistic activity in these B cell proliferation assays. Interestingly, hIL-4.Y124D also strongly inhibited both ***IL*** - ***4*** or IL-13-induced IgG4 and IgE synthesis in cultures of peripheral blood mononuclear cells, or highly purified sIgD+ B cells cultured in the presence of anti-CD40 mAbs. ***IL*** - ***4*** and IL-13-induced IgE responses were inhibited > 95% at a approximately 50- or approximately 20-fold excess of hIL-4.Y124D, respectively, despite the fact that the ***IL*** - ***4*** mutant protein had a weak agonistic activity. This agonistic activity was 1.6 +/- 1.9% (n = 4) of the maximal IgE responses induced by saturating concentrations of ***IL*** - ***4*** . Taken together, these data indicate that there are commonalities between the ***IL*** - ***4*** and ***IL*** - ***13*** ***receptor*** . In addition, since hIL-4.Y124D inhibited both ***IL*** - ***4*** and IL-13-induced IgE synthesis, it is likely that antagonistic mutant ***IL*** - ***4*** proteins may have potential clinical use in the treatment of IgE-mediated allergic diseases.

L5 ANSWER 56 OF 82 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 2000:104883 BIOSIS
DOCUMENT NUMBER: PREV200000104883
TITLE: Functional implications for signaling via the IL4R/IL13R complex on bovine cells.
AUTHOR(S): Trigona, Wendy L.; Brown, Wendy C.; Estes, D. Mark (1)
CORPORATE SOURCE: (1) College of Veterinary Medicine, Department of Veterinary Pathobiology, University of Missouri, Columbia, MO, 65211 USA
SOURCE: Veterinary Immunology and Immunopathology, (Dec. 15, 1999) Vol. 72, No. 1-2, pp. 73-79.
ISSN: 0165-2427.
DOCUMENT TYPE: General Review
LANGUAGE: English
SUMMARY LANGUAGE: English
AB ***IL*** - ***4*** and IL-13 share a wide range of activities on monocytes, epithelial cells and B cells and thus play an important role in host defense. Many of these activities are not conserved among species as human, but not murine, B cells are thought to be responsive to IL-13. We previously demonstrated that human IL-13 is highly conserved at the nucleic acid level with a candidate bovine IL-13 cDNA homologue. Moreover, recombinant human IL-13 stimulates Ig secretion by appropriately activated bovine B cells. These studies have been extended to examining Ig class switching at both the protein and mRNA levels in addition to examining other markers of cellular activation. Our results suggest that IL-13 influences B cell differentiation by enhancing IgM, IgG1, and IgE production. IL-13 stimulation alone increases MHC class II expression and progression through cell cycle, although at lower levels in comparison to rboIL-4. The biology of the receptors for ***IL*** - ***4*** and IL-13 is complex and raises several key questions with regard to ***IL*** - ***4*** -dependent and -independent mechanisms of host immunomodulation. Recent studies suggest that at least four chains are involved. These include the p140 ***IL*** - ***4*** binding chain (IL-4Ralpha), the common gamma chain (gammac chain), ***IL*** - ***13*** ***receptor*** alpha-1 chain (IL-13Ralpha-1) and the ***IL*** - ***13*** ***receptor*** alpha-2 chain (IL-13Ralpha-2). We have recently cloned cDNAs for the bovine homologues of the IL-13Ralpha-1 and IL-4Ralpha chains and evaluated mRNA expression for a variety of cell types following stimulation. The expression patterns and their implications for receptor chain utilization in signaling via these key TH2 signature cytokines will be discussed.

L5 ANSWER 57 OF 82 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 1999:464170 BIOSIS
DOCUMENT NUMBER: PREV199900464170
TITLE: A key role for interleukin-13 in allergic asthma.
AUTHOR(S): Minty, Adrian (1)
CORPORATE SOURCE: (1) Sanofi Synthelabo Recherche, 31676, Labege France
SOURCE: M-S (Medecine Sciences), (June July, 1999) Vol. 15, No. 6-7, pp. 863-867.
ISSN: 0767-0974.
DOCUMENT TYPE: Article
LANGUAGE: French

L5 ANSWER 58 OF 82 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 1999:314766 BIOSIS
DOCUMENT NUMBER: PREV199900314766
TITLE: Molecular regulation of human IgE synthesis.
AUTHOR(S): Yanagihara, Yukiyoshi (1)
CORPORATE SOURCE: (1) Clinical Research Center for Allergy, National Sagamihara Hospital, 18-1 Sakuradai, Sagamihara, 228-8522 Japan
SOURCE: Allergology International, (June, 1999) Vol. 48, No. 2, pp. 111-119.
ISSN: 1323-8930.
DOCUMENT TYPE: General Review
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Human IgE synthesis is largely dependent on the production of interleukin (***IL***)- ***4*** or IL-13 and the expression of CD40 ligand. Such B cell help is not only provided by CD4+ T cells, but also by CD8+ T cells, gammadelta T cells, mast cells, basophils and eosinophils. The ***IL*** - ***4*** receptor alpha chain (IL-4Ralpha) expressed on B cells is shared by the functional IL-4R and IL-13R and is a crucial component required for signal transduction leading to germline Cepsilon transcription, which is a prerequisite for IgE isotype switching. Interleukin-4 activates Janus kinase (JAK)1, JAK3 and phosphatidylinositol 3-kinase (PI3-K) and, subsequently, induces nuclear translocation of signal transducers and activators of transcription (STAT)6 and nuclear factor (NF)-kappaB, which interact at the level of the Iepsilon promoter. The two variants of the IL-4Ralpha, which have been identified in association with atopy, are associated with enhanced

responsiveness to
IL - ***4*** . Ligation of CD40 on B cells up-regulates
IL - ***4*** - or IL-13-driven germline Cepsilon transcription
and further induces deletional switch recombination that results in IgE
isotype switching, mature Cepsilon transcription and IgE synthesis.
Signaling pathways mediated by CD40 include activation of Lyn, Pl3-K, JAK3
and members of the mitogen-activated protein kinase subfamily,
multimerization of tumor necrosis factor-alpha receptor-associated factor
(TRAF)2, TRAF3, TRAF5 and TRAF6 and translocation of NF-kappaB and STAT3.
In addition, Ku70/86, DNA-dependent protein kinase and rad51/54 may be
involved in switch recombination. Taken together, activation of kinases,
induction of second messengers, nuclear expression of transcription
factors and localization of DNA-binding proteins are integrated to produce
the terminal differentiation of a B cell into an IgE-secreting plasma
cell. Elucidation of the detailed mechanisms of IgE isotype switching will
contribute to the development of potential new therapeutic procedures for
the regulation of the IgE response in atopic patients.

L5 ANSWER 59 OF 82 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 1999:289383 BIOSIS
DOCUMENT NUMBER: PREV199900289383
TITLE: Interleukin-13 enhances pancreatic cancer cell growth via
mitogen-activated protein kinase: Evidence for autocrine
actions.
AUTHOR(S): Kommann, Marko (1); Joerg, Kleeff (1); Beger, H. G.; Korc,
Murray
CORPORATE SOURCE: (1) Univ of CA, Irvine, Irvine, CA USA
SOURCE: Gastroenterology, (April, 1999) Vol. 116, No. 4 PART 2, pp.
A442.
Meeting Info.: Digestive Disease Week and the 100th Annual
Meeting of the American Gastroenterological Association
Orlando, Florida, USA May 16-19, 1999 American Gastroenterological Association
. ISSN: 0016-5085.
DOCUMENT TYPE: Conference
LANGUAGE: English

L5 ANSWER 60 OF 82 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 1999:287888 BIOSIS
DOCUMENT NUMBER: PREV199900287888
TITLE: Distinct signaling pathways triggered by ***IL*** -
4 - and ***IL*** - ***13*** - ***receptor***
complexes.
AUTHOR(S): Friedrich, Karlheinz (1); Braendlein, Stephanie (1);
Kammer, Winfried (1); Lischke, Antje (1); Erhardt, Ingrid
(1)
CORPORATE SOURCE: (1) Physiologische Chemie II, Biozentrum der Universitaet
Wuerzburg, Am Hubland, D-97074, Wuerzburg Germany
SOURCE: European Journal of Cell Biology, (1999) Vol. 78, No.
SUPPL. 49, pp. 67.
Meeting Info.: 23rd Annual Meeting of the German Society
for Cell Biology Rostock, Germany March 14-18, 1999 German
Society for Cell Biology
. ISSN: 0171-9335.
DOCUMENT TYPE: Conference
LANGUAGE: English

L5 ANSWER 61 OF 82 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 1998:463461 BIOSIS
DOCUMENT NUMBER: PREV199800463461
TITLE: ***IL4*** and IL13 bind to different types of
functional ***IL4*** / ***IL13*** ***receptors***
on human lung fibroblasts.
AUTHOR(S): Doucet, C. (1); Brouty-Boye, D. (1); Pottin-Clemenceau, C.
(1); Jasmin, C. (1); Canonica, G.; Azzarone, B. (1)
CORPORATE SOURCE: (1) U268 INSERM, 16 av. PV Couturier, 94807 Villejuif Cedex
France
SOURCE: Research in Immunology, (March-April, 1998) Vol. 149, No.
3, pp. 268.
Meeting Info.: Meeting on New Therapeutic Approaches for
Allergic Diseases of the Respiratory Tract Paris, France
April 1-4, 1998
ISSN: 0923-2494.
DOCUMENT TYPE: Conference
LANGUAGE: English

L5 ANSWER 62 OF 82 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 1998:69478 BIOSIS
DOCUMENT NUMBER: PREV199800069478
TITLE: The ***IL*** - ***13*** ***receptor*** regulates
IL-13 and ***IL*** - ***4*** activities.
AUTHOR(S): Orchansky, Patricia L.; Lee, Frances; Schrader, John W.
CORPORATE SOURCE: Univ. B.C., Biomedical Res. Centre, 2222 Health Sciences
Mall, Vancouver, BC V6T 1Z3 Canada
SOURCE: Cytokine, (Nov., 1997) Vol. 9, No. 11, pp. 932.
Meeting Info.: Fifth Annual Conference of the International
Cytokine Society Lake Tahoe, Nevada, USA November 9-13,
1997 International Cytokine Society
. ISSN: 1043-4666.
DOCUMENT TYPE: Conference
LANGUAGE: English

L5 ANSWER 63 OF 82 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 1996:456265 BIOSIS
DOCUMENT NUMBER: PREV199699178621
TITLE: Modulation of the human IgE response.
AUTHOR(S): De Vries, J. E. (1); Yssel, H.
CORPORATE SOURCE: (1) DNAX Res. Inst., 901 California Avenue, Palo Alto, CA
94304 USA
SOURCE: European Respiratory Journal Supplement, (1996) Vol. 9, No.
SUPPL. 22, pp. 58S-62S.
ISSN: 0904-1850.
DOCUMENT TYPE: Article
LANGUAGE: English
AB Studies on the immunological basis of allergic diseases have indicated
that enhanced production of the cytokines interleukin (***IL***)-
4 and IL-13 and the reduced production of interferon-gamma
(IFN-gamma) by allergen-specific T-cells contribute to enhanced
immunoglobulin E (IgE) synthesis and the development of allergic disease
in certain individuals. Therefore, inhibition of ***IL*** - ***4***
and IL-13 synthesis or blocking of activities of these cytokines would be
one approach to inhibiting IgE production. In the present communication,
novel approaches toward this goal are discussed. It is shown that an
IL - ***4*** mutant protein, in which the tyrosine residue at
position 124 is replaced by aspartic acid (***IL*** - ***4***
.Y124D), binds with high affinity to the ***IL*** - ***4***
receptor, without receptor activation. ***IL*** - ***4*** .Y124D acts
as a potent antagonist both of ***IL*** - ***4*** and IL-13 activity
in vitro, and inhibits immunoglobulin G-4 (IgG-4) and IgE production
induced by these cytokines. These data am compatible with the notion that
the ***IL*** - ***4*** and ***IL*** - ***13*** ***receptors*** are complex receptors, which share a common component,
which is required for signal transduction. In addition, it has been
demonstrated that allergen-specific T-cells, belonging to the T-helper 2
(Th2) subset can be rendered anergic after incubation with
allergen-derived peptides representing minimal T-cell activation inducing
epitopes. These anergic Th2 cells failed to produce ***IL*** - ***4***
and IL-13, and failed to proliferate after activation with allergen and
antigen-presenting cells (APC). The anergized T cells also failed to give
B-cells help in IgE synthesis, although they expressed normal levels of
the CD40 ligand (CD40L). Exogenous ***IL*** - ***4*** or IL-13
failed to restore IgE synthesis, indicating that in addition to CD40L
other co-stimulatory signals are required for productive T-cell/B-cell
interactions, resulting in IgE synthesis. IgE production was restored by
exogenous IL-2, demonstrating that IL-2 reverses the nonresponsive state
and helper function of these nonresponsive T-cells. It is tempting to
speculate that induction of T-cell nonresponsiveness by allergen derived
peptides may represent the underlying mechanisms for successful
immunotherapy in allergenic patients.

L5 ANSWER 64 OF 82 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 1996:450919 BIOSIS
DOCUMENT NUMBER: PREV199699173275
TITLE: Stimulation of signal transduction pathways in lymphocytes
from patients with X-SCID: Activation through the ***IL*** - ***4*** / ***IL*** - ***13*** ***receptor*** but not the IL-2 receptor.
AUTHOR(S): Smith, Susan (1); Johnston, James; Jahn, Thomas; Puck,
Jennifer; O'Shea, John; Weinberg, Kenneth; Taylor, Naomi
CORPORATE SOURCE: (1) Div. Res. Immunol., Child. Hosp. Los Angeles, Los
Angeles, CA USA
SOURCE: Experimental Hematology (Charlottesville), (1996) Vol. 24,
No. 9, pp. 1100.
Meeting Info.: 25th Annual Meeting of the International
Society for Experimental Hematology New York, New York, USA
August 23-27, 1996
ISSN: 0301-472X.
DOCUMENT TYPE: Conference
LANGUAGE: English

L5 ANSWER 65 OF 82 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 1995:382536 BIOSIS
DOCUMENT NUMBER: PREV199598396836
TITLE: Modulation of human B cell maturation and IgE synthesis by
IL - ***4*** and an ***IL*** - ***4*** /
IL - ***13*** ***receptor*** antagonist in
SCID-hu mice.
AUTHOR(S): Carballido, J. M.; Schols, D.; Namikawa, R.; Roncarolo,
M.-G.; De Vries, J. E.
CORPORATE SOURCE: DNAX Res. Inst., Palo Alto, CA USA
SOURCE: 9TH INTERNATIONAL CONGRESS OF IMMUNOLOGY.. (1995) pp. 326.
The 9th International Congress of Immunology.
Publisher: 9th International Congress of Immunology San
Francisco, California, USA.
Meeting Info.: Meeting Sponsored by the American
Association of Immunologists and the International Union of
Immunological Societies San Francisco, California, USA July
23-29, 1995
DOCUMENT TYPE: Conference
LANGUAGE: English

L5 ANSWER 66 OF 82 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 1994:139011 BIOSIS
DOCUMENT NUMBER: PREV199497152011
TITLE: IL-13-induced B cell proliferation and IgE synthesis is
blocked by an ***IL*** - ***4*** mutant protein:
Support for a shared component of the ***IL*** - ***4*** and ***IL*** - ***13*** ***receptors***
.
AUTHOR(S): Aversa, Gregorio; Cocks, Benjamin; Punnonen, Juha; De-Waal
Malefyt, Rene; Vega., Felix, Jr.; Zurawski, Sandra M.;
Zurawski, Gerard; De Vries, Jan E.
CORPORATE SOURCE: Dep. Human Immunol., DNAX Res. Inst. Mol. Cellular Biol.,
901 California Ave., Palo Alto, CA 94304 USA
SOURCE: Journal of Leukocyte Biology, (1993) Vol. 0, No. SUPPL.,
pp. 93.
Meeting Info.: International Congress on the

Regulation of
Leukocyte Production and Immune Function held at the Joint
Meeting of the Australasian Society for Immunology and
Society for Leukocyte Biology Sydney, New South Wales,
Australia December 1-5, 1993
ISSN: 0741-5400.
DOCUMENT TYPE: Conference
LANGUAGE: English

L5 ANSWER 67 OF 82 SCISEARCH COPYRIGHT 2000 ISI (R)
ACCESSION NUMBER: 2000:184125 SCISEARCH
THE GENUINE ARTICLE: 289BV
TITLE: Novel polymorphism in the coding region of the ***IL***
- ***13*** ***receptor*** alpha' gene: Association
study with atopic asthma in the Japanese population
AUTHOR: Ahmed S; Ihara K (Reprint); Sasaki Y; Nakao F; Nishima S;
Fujino T; Hara T
CORPORATE SOURCE: KYUSHU UNIV, GRAD SCH MED SCI, DEPT PEDIAT, HIGASHI KU,
3-1-1 MAIDASHI, FUKUOKA 8128582, JAPAN (Reprint); KYUSHU
UNIV, GRAD SCH MED SCI, DEPT PEDIAT, HIGASHI KU, FUKUOKA
8128582, JAPAN; NATL MINAMI FUKUOKA CHEST HOSP, FUKUOKA,
JAPAN; SHIN KOKURA HOSP, DIV PEDIAT, KITAKYUSHU, FUKUOKA,
JAPAN
COUNTRY OF AUTHOR: JAPAN
SOURCE: EXPERIMENTAL AND CLINICAL IMMUNOGENETICS, (1 MAR 2000)
Vol. 17, No. 1, pp. 18-22.
Publisher: KARGER, ALLSCHWILERSTRASSE 10, CH-4009 BASEL,
SWITZERLAND.
ISSN: 0254-9670.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 14
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB Interleukin (***IL***)- ***4*** and IL-13 play key roles in the
development of atopic asthma, The ***IL*** - ***13***
receptor (R) alpha' chain is a component of both IL-4R and IL-13R
complexes. By screening the whole coding region of the IL-13R alpha' gene
for polymorphisms, we identified a new polymorphism at nucleotide position
1050 from the ATG start codon. The allelic frequency of the C/T
polymorphism in the Japanese population was found to be 0.97:0.03, Because
of the low frequency of the T allele, the association study failed to
indicate any significant association between this polymorphism and atopic
asthma in the Japanese population. Further studies are required in other
racial groups with higher frequencies of this polymorphism to elucidate
the association. Copyright (C) 2000 S. Karger AG, Basel.

L5 ANSWER 68 OF 82 SCISEARCH COPYRIGHT 2000 ISI (R)
ACCESSION NUMBER: 2000:734 SCISEARCH
THE GENUINE ARTICLE: 266FD
TITLE: Genetic and environmental interaction in allergy and
asthma
AUTHOR: Holgate S T (Reprint)
CORPORATE SOURCE: SOUTHAMPTON GEN HOSP, RESP CELL & MOL BIOL DIV, LEVEL D,
CTR BLOCK, SOUTHAMPTON SO16 6YD, HANTS, ENGLAND (Reprint)
COUNTRY OF AUTHOR: ENGLAND
SOURCE: JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY, (DEC 1999)
Vol. 104, No. 6, pp. 1139-1146.
Publisher: MOSBY-YEAR BOOK INC, 11830 WESTLINE INDUSTRIAL
DR, ST LOUIS, MO 63146-3318.
ISSN: 0091-6749.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: English
REFERENCE COUNT: 72
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB Asthma is an inflammatory disorder of the airways involving coordinate
up-regulation of T(H)2-type cytokines encoded in a cluster on chromosome
5q(31-33) on T Cells and inflammatory cells. There is also a requirement
for local airway susceptibility factors that, together with T(H)2
polarization, results in hyperresponsiveness, variable airflow
obstruction, and, over time, remodeling of the airway wall, Asthma has
strong genetic and environmental components that interact both in the
induction and subsequent expression of the disease phenotypes, Multiple
genes are involved and probably interact. Whole genome screens are
beginning to identify gene-rich regions of special relevance to asthma and
atopy, although a novel disease-related gene has yet to be discovered from
these. By contrast, there are a plethora of candidate genes whose function
in relation to disease pathophysiologic mechanisms and response to
treatment are known, Two examples are polymorphisms involving ***IL***
- ***4*** receptors and the enzymes controlling cysteinyl Leukotriene
production, Abnormal signaling between the epithelium, which is in contact
with the environment, and the underlying (mgo)fibroblasts and dendritic
cells indicating reactivation of the epithelial mesenchymal trophic unit,
which is involved in fetal lung development and branching, provide a basis
for asthma that encapsulates both T(H)2 polarization and airway wall
remodeling.

L5 ANSWER 69 OF 82 SCISEARCH COPYRIGHT 2000 ISI (R)
ACCESSION NUMBER: 1999:141499 SCISEARCH
THE GENUINE ARTICLE: 165GT
TITLE: Development of a recombinant interleukin-4-Pseudomonas
exotoxin for therapy of glioblastoma
AUTHOR: Puri R K (Reprint)
CORPORATE SOURCE: NIH, LAB MOL TUMOR BIOL, DIV CELLULAR & GENE THERAPIES,
CTR BIOL EVALUAT & RES, FOOD & DRUG ADM, BETHESDA, MD
20892 (Reprint)
COUNTRY OF AUTHOR: USA
SOURCE: TOXICOLOGIC PATHOLOGY, (JAN-FEB 1999) Vol. 27, No. 1, pp.
53-57.
Publisher: SOC TOXICOLOGIC PATHOLOGISTS, 1041 NEW
HAMPSHIRE ST PO BOX 368, LAWRENCE, KS 66044.
ISSN: 0192-6233.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 28
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB About 12,000 Americans are diagnosed with malignant astrocytoma each
year. Despite surgery, radiotherapy, and chemotherapy, the prognosis of
these patients remains poor. Targeted toxins based on the identification
of novel antigens or receptors provide a promising new approach to
treating cancer. We have identified one such cell surface protein in the
form of interleukin (***IL***)- ***4*** receptors (IL-4R) on human
malignant astrocytoma. Normal brain tissues from frontal cortex and
temporal lobe cortex do not express IL-4R. To target IL-4R, we generated a
chimeric fusion protein composed of ***IL*** - ***4*** and
Pseudomonas exotoxin (***IL4*** -PE). This toxin is highly cytotoxic to
IL-4R-bearing human brain cancer cells. Preclinical toxicologic
experiments were performed in mice, rats, and guinea pigs to determine an
maximum tolerated dose. Intrathecal administration in cynomolgus monkeys
produced high cerebrospinal fluid levels without any central nervous
system or other abnormalities. When ***IL4*** -PE was injected into the
right frontal cortex of rats, localized necrosis was observed at 1,000 but
not less than or equal to 100 mu g/ml doses. Intravenous administration of
this biologic to monkeys produced reversible grade 3 or grade 4 elevations
of hepatic enzymes in a dose-dependent manner. These results indicate that
localized administration can produce nontoxic levels of ***IL4*** -PE
that may have significant activity against astrocytoma. In vivo
experiments with nude mice have demonstrated that ***IL4*** -PE has
significant antitumor activity against human glioblastoma tumor model.
Intratumor administration of ***IL4*** -PE has been initiated for the
treatment of malignant astrocytoma in a phase I clinical trial.

L5 ANSWER 70 OF 82 SCISEARCH COPYRIGHT 2000 ISI (R)
ACCESSION NUMBER: 1998:952058 SCISEARCH
THE GENUINE ARTICLE: 146ZW
TITLE: Comparative studies on the effects of interleukin-4 and
interleukin-13 on cytokine and prostaglandin E-2 production by amnion-derived WISH cells
AUTHOR: Keelan J A (Reprint); Sato T A; Mitchell M D
CORPORATE SOURCE: UNIV AUCKLAND, SCH MED, FAC MED & HLTH SCI, DEPT PHARMACOL
& CLIN PHARMACOL, PRIVATE BAG 92019, AUCKLAND, NEW ZEALAND
(Reprint)
COUNTRY OF AUTHOR: NEW ZEALAND
SOURCE: AMERICAN JOURNAL OF REPRODUCTIVE IMMUNOLOGY, (NOV 1998)
Vol. 40, No. 5, pp. 332-338.
Publisher: MUNKSGAARD INT PUBL LTD, 35 NORRE SOGADE, PO
BOX 2148, DK-1016 COPENHAGEN, DENMARK.
ISSN: 8755-8920.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 39
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB PROBLEM: In hematopoietic cells, interleukin (IL)-13 shares many
actions with ***IL*** - ***4*** . The effects of IL-13 in gestational
tissues have yet to be reported, however. We compared the effects of
IL - ***4*** and IL-13 on the production of cytokines and
prostaglandin E-2 (PGE(2)) in epithelial amnion-derived WISH cells.
METHOD OF STUDY: WISH cells were treated with ***IL*** - ***4***
or IL-13 (0.08-10 ng/ml) with/without cotreatment with IL-1 beta (0.2
ng/ml), tumor necrosis factor-alpha (10 ng/ml) or epidermal growth factor
(5 ng/ml). The production of IL-6, IL-8, and PGE(2) was measured by
immunoassay after 16 hr.
RESULTS: Both ***IL*** - ***4*** and IL-13 inhibited PGE(2)
production with indistinguishable concentration-response curves, under
basal or stimulated conditions. The maximal inhibition of 1
beta-stimulated PGE(2) production (to 28% +/- 10% of control) was seen at
10 ng/ml of ***IL*** - ***4*** or IL-13. Basal IL-6 production was
stimulated approximately twofold by ***IL*** - ***4*** and IL-13,
whereas ***IL*** - ***4*** and IL-13 both inhibited
cytokine-stimulated (but not basal) IL-8 production by approximately 50%.
In the presence of 1 ng/ml of ***IL*** - ***4*** , IL-13 was unable
to further inhibit PGE(2) production.
CONCLUSIONS: The inhibition of PGE(2) and IL-8 production by ***IL***
- ***4*** in WISH cells is mimicked by IL-13. Both cytokines, probably
through binding to a common receptor complex, may share a role in
suppressing inflammatory reactions within intrauterine tissues.

L5 ANSWER 71 OF 82 SCISEARCH COPYRIGHT 2000 ISI (R)
ACCESSION NUMBER: 96:742819 SCISEARCH
THE GENUINE ARTICLE: VL234
TITLE: INTERLEUKIN-13 INHIBITS GROWTH OF HUMAN RENAL-CELL

CARCINOMA-CELLS INDEPENDENTLY OF THE P140 INTERLEUKIN-4
RECEPTOR CHAIN
AUTHOR: OBIRI N I (Reprint); HUSAIN S R; DEBINSKI W; PURI R K
CORPORATE SOURCE: NIH, LAB MOL TUMOR BIOL, DIV CELLULAR & GENE THERAPIES,
CTR BIOL EVALUAT & RES, HFM-530, BLDG 29B, BETHESDA, MD,
20892 (Reprint); US FDA, LAB MOL TUMOR BIOL, DIV CELLULAR
& GENE THERAPIES, CTR BIOL EVALUAT & RES, BETHESDA, MD,
20892; PENN STATE UNIV, COLL MED, MILTON S HERSHEY MED
CTR, DEPT MED, DIV NEUROSURG, HERSHEY, PA, 17033
COUNTRY OF AUTHOR: USA
SOURCE: CLINICAL CANCER RESEARCH, (OCT 1996) Vol. 2, No. 10, pp.
1743-1749.
ISSN: 1078-0432.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: CLIN
LANGUAGE: ENGLISH
REFERENCE COUNT: 32
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB Interleukin-13 (TL-13) is a cytokine produced primarily by activated T
lymphocytes. It exerts a variety of effects on different cell types,
including monocytes, B lymphocytes, mast cells, and keratinocytes. The
effects of IL-13 on target cells are often similar to the effects of
IL - ***4*** , which is another cytokine product of activated T
lymphocytes. We recently described the expression of intermediate- to
high-affinity receptors for IL-13 (IL-13R) on renal cell carcinoma (RCC)
cells. In the present study, we examined the effect of IL-13 on the growth
of RCC cells as measured by [H-3]thymidine uptake and a clonogenic assay.
In addition, we used an IL-4R-specific antibody to examine the specificity
of IL-4R and IL-13R binding and function, We observed that IL-13 inhibited
RCC cell proliferation by up to 50% and colony formation by up to 32% when
compared with cells cultured in medium alone. A combination of ***IL***
- ***4*** and IL-13 did not have an additive or synergistic effect on
the growth of RCC cells, These cells expressed mRNA for IL-13 and secreted
immunoreactive IL-13 protein in culture, The growth-inhibitory effects of
IL-13 were specific, because they were not affected by antibodies to IL-4
or to the 140-kilodalton subunit of IL-4R. Furthermore, polyclonal
antibodies to LL-4R failed to inhibit the binding of I-125-IL-13 to RCC
cells, These results indicate that IL-13 has significant antiproliferative
effects on human RCC cells, and the inhibition of IL-13 effects by
anti-IL-4R antibody previously reported in lymphoid cells does not occur
in RCC cells.

L5 ANSWER 72 OF 82 SCISEARCH COPYRIGHT 2000 ISI (R)
ACCESSION NUMBER: 96:629521 SCISEARCH
THE GENUINE ARTICLE: VC092
TITLE: STIMULATION OF SIGNAL-TRANSDUCTION PATHWAYS IN LYMPHOCYTES
FROM PATIENTS WITH X-SCID-ACTIVATION THROUGH THE
IL - ***4*** / ***IL*** - ***13*** ***RECEPTOR*** BUT NOT THE IL-2 RECEPTOR
AUTHOR: SMITH S (Reprint); JOHNSTON J; JAHN T; PUCK J; OSHEA J;
WEINBERG K; TAYLOR N
CORPORATE SOURCE: CHILDRENS HOSP LOS ANGELES, DIV IMMUNOL RES, LOS ANGELES,
CA, 90027; NIAMS, BETHESDA, MD, 00000; NIH, NATL CTR HUMAN
GENOME RES, BETHESDA, MD, 00000
COUNTRY OF AUTHOR: USA
SOURCE: EXPERIMENTAL HEMATOLOGY, (AUG 1996) Vol. 24, No. 9, pp.
411.
ISSN: 0301-472X.
DOCUMENT TYPE: Conference; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: No References

L5 ANSWER 73 OF 82 SCISEARCH COPYRIGHT 2000 ISI (R)
ACCESSION NUMBER: 95:292579 SCISEARCH
THE GENUINE ARTICLE: QU271
TITLE: ISOLATION OF AN IL-13-DEPENDENT SUBCLONE OF THE B9
CELL-LINE USEFUL FOR THE ESTIMATION OF HUMAN IL-13
BIOACTIVITY
AUTHOR: LABITLEBOUTEILLER C (Reprint); ASTRUC R; MINTY A; FERRARA
P; LUPKER J H
CORPORATE SOURCE: SANOFI RECH, CTR LABEGE, BP 137, F-31676 LABEGE, FRANCE
(Reprint)
COUNTRY OF AUTHOR: FRANCE
SOURCE: JOURNAL OF IMMUNOLOGICAL METHODS, (12 APR 1995) Vol. 181,
No. 1, pp. 29-36.
ISSN: 0022-1759.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 20
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB A novel sub-clone of the B9 hybridoma cell line (B9-1-3) has been
selected by cloning following continuous culture in rhIL-13. This cell
line shows an increased sensitivity to both hIL-13 and mIL-4 compared to
the parental B9 cell line. The proliferative response to IL-13 can be
blocked with an anti- ***IL*** - ***4*** receptor monoclonal antibody
but not with the soluble ***IL*** - ***4*** receptor, suggesting
that IL-13- and ***IL*** - ***4*** -binding receptor subunits are
distinct but form part of a common receptor complex. Although the B9-1-3
cell line is still sensitive to picogrammes of IL-6, it can be used to
measure IL-13 in the presence of IL-6 by inclusion of excess neutralizing
IL-6 antibody. This cell line should thus prove useful both in measuring
the IL-13 bioactivity and for the dissection of the molecular nature of
the IL-13: ***IL*** - ***4*** receptor complex.

L5 ANSWER 74 OF 82 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1999:659425 CAPLUS
DOCUMENT NUMBER: 131:285412
TITLE: Mutagenized IL13-based chimeric molecules
INVENTOR(S): Debinski, Waldemar
PATENT ASSIGNEE(S): The Penn State Research Foundation, USA
SOURCE: PCT Int. Appl., 57 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9951643	A1	19991014	WO 1999-US7188	19990331
AU 9933774	A1	19991025	AU 1999-33774	19990331

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1998-54711 19980403
WO 1999-US7188 19990331
AB This invention provides mutagenized interleukin 13 mols. that show
improved specificity for the restricted (***IL4*** independent)
IL13 ***receptor*** and reduced cross reactivity with the
IL4 / ***IL4*** shared receptor. The mutagenized IL13 mols.
include one or more mutations in a domain that interacts with the 140 kDa
hIL4R.beta. or the hIL13R.alpha.1 subunit. These mutagenized IL13 mols.
provide effective targeting moieties in chimeric mols. (e.g. fusion
proteins) that specifically deliver effector mols. (e.g. cytotoxins) to
cells overexpressing ***IL13*** ***receptors*** (e.g. cancer cells
such as gliomas).

L5 ANSWER 75 OF 82 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1999:395927 CAPLUS
DOCUMENT NUMBER: 131:212694
TITLE: Signal transduction by cytokines
AUTHOR(S): Schrader, John W.
CORPORATE SOURCE: Biomedical Research Centre, University of British
Columbia, Vancouver, BC, V6T 1Z3, Can.
SOURCE: Signal Transduction Mast Cells Basophils (1999),
66-84. Editor(s): Razin, Ehud; Rivera, Juan. Springer: New York, N. Y.
CODEN: 67UEAX
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review with 118 refs. Mast cells and cytokines, the four-helix bundle
cytokine family, the cytokine receptor superfamily, ligand oligomerization
of cytokine receptors, interferons and interleukins are some of the topics
discussed. Tyrosine phosphorylation events involving Shc as an adaptor,
MAP kinases, JNK/SAP kinases, SHP-2 tyrosine phosphatase, JAK-STAT
pathway, PI-3 kinase and the activation of Ras proteins in mast cell
activation are some of the events discussed here. The role of ***IL***
- ***4*** and ***IL*** - ***13*** ***receptors*** and the
differences and similarities in signal transduction by different cytokines
are also summarized.

L5 ANSWER 76 OF 82 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1998:648072 CAPLUS
DOCUMENT NUMBER: 130:64806
TITLE: Cytokines and IgE regulation
AUTHOR(S): Punnonen, Juha; De Vries, Jan E.
CORPORATE SOURCE: Human Immunology Department, DNAX Research Institute
of Molecular and Cellular Biology, Palo Alto, CA, USA
SOURCE: Allergy Allerg. Dis. (1998), 13-40. Editor(s):
Denburg, Judah A. Humana: Totowa, N. J.
CODEN: 66UHAZ
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review with 226 refs. of the mol. and biol. properties of interleukin-4
and interleukin-13, as well as the effects of other cytokines on the
IL - ***4*** - and IL-13-induced IgE formation. In addn., the
authors discuss recently characterized ***IL*** - ***4*** and
IL - ***13*** ***receptor*** antagonists as possible means
to block ***IL*** - ***4*** - and IL-13-induced IgE synthesis in
atopic individuals.

L5 ANSWER 77 OF 82 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1998:480562 CAPLUS
DOCUMENT NUMBER: 129:147990
TITLE: The signal transduction mechanism of ***IL*** -
4 in X-linked severe combined immunodeficiency
patients
AUTHOR(S): Izuhara, Kenji
CORPORATE SOURCE: Department Human Genetics, National Institute
Genetics, Japan
SOURCE: Asahi Garasu Zaidan Josei Kenkyu Seika Hokoku (1997)
No pp. given
CODEN: AGSHEN; ISSN: 0919-9179
URL: http://www.af-info.or.jp/JPN/subsidy/report2/1998/body/97A-C15-P050.TXT
PUBLISHER: Asahi Garasu Zaidan
DOCUMENT TYPE: Journal; (online computer file)

LANGUAGE: Japanese
AB Both interleukin 4 (***IL*** - ***4***) and IL-13 are pleiotropic
cytokines, and have similar biol. activities with each other. The
IL - ***4*** receptor is assumed to be composed of the
IL - ***4*** receptor .alpha. chain (IL-4R.alpha.) and the IL-2
receptor .gamma. chain (.gamma.c), and the ***IL*** - ***13***
receptor is assumed to be composed of the ***IL*** - ***13***
receptor .alpha. chain and IL-4R.alpha., resp. To clarify the
signal transduction mechanisms of these two cytokines, we analyzed those
in B cells derived from X-linked severe combined immunodeficiency
patients, in which there exist genetic abnormalities on the .gamma.c gene.
Consequently, both a tyrosine kinase, JAK3, and a transcription factor,
STAT6, which are known to be activated by ***IL*** - ***4*** in
normal B cells, were not activated in patients' B cells. These results
suggest that there is a cascade of .gamma.c/JAK3/STAT6 in the signal
pathway of ***IL*** - ***4*** . On the other hand, the finding that
STAT6 was activated by IL-13 even in patients' cells suggest that IL-13R
does not utilize .gamma.c.

L5 ANSWER 78 OF 82 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1997:270246 CAPLUS
DOCUMENT NUMBER: 127:62254
TITLE: A novel 4-kb interleukin-13 receptor .alpha. mRNA
expressed in human B, T, and endothelial cells encoding an alternate type-II interleukin-4/interleukin-13 receptor
AUTHOR(S): Gauchat, Jean Francois; Schlangenhauf, Edith; Feng,
Ning Ping; Moser, Rene; Yamage, Mat; Jeannin, Pascale;
Alouani, Sami; Elson, Greg; Notarangelo, Luigi D.;
Wells, Timothy; Eugster, Hans Pietro; Bonnefoy, Jean
Yves
CORPORATE SOURCE: Geneva Biomedical Research Institute, Glaxo Wellcome
Research Development S. A., Plan-les-Quates, CH-1228,
Switz.
SOURCE: Eur. J. Immunol. (1997), 27(4), 971-978
CODEN: EJIMAF; ISSN: 0014-2980
PUBLISHER: VCH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A 4 kb human interleukin-13 receptor (IL-13R) chain cDNA was cloned from a
B cell cDNA library using expressed sequence tags homologous to mouse
IL-13R as probes. The deduced protein sequence shows a significant level
of sequence identity with the IL-5R and the human IL-13R identified
recently by expression cloning. The cytoplasmic region is very highly
conserved between human and mouse homologs and contains a consensus
binding motif for a signal transducer and activator of transcription. The
cDNA encodes a protein binding IL-13 when expressed alone which
participates in a receptor complex for both ***IL*** - ***4*** and
IL-13 when expressed in conjunction with the IL-4R.alpha. chain.
Transcripts for this IL-13R chain could be detected in most tissues and
organs studied and in T, B, endothelial cells, basophilic, immature mast
cell, and monocytic cell lines. The pattern of expression is different
from the other recently cloned IL-13R mol., and correlates with sites
where ***IL*** - ***4*** and IL-13 signaling is known to occur.
This novel receptor is likely to be implicated in reactions involved in
IgE responses, T helper 2 differentiation, adhesion of leukocytes to
endothelium, and in pathol. phenomena such as allergy, atopy, and asthma.

L5 ANSWER 79 OF 82 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1997:69036 CAPLUS
DOCUMENT NUMBER: 126:170067
TITLE: Control of IgE antibody production by drug
AUTHOR(S): Yanagihara, Yukiyoshi
CORPORATE SOURCE: Natl. Sagamihara Hosp., Sagamihara, 228, Japan
SOURCE: Arerugi no Ryoiki (1995), Volume Date 1996, 3(1),
13-18
CODEN: ARRYFB; ISSN: 1340-2358
PUBLISHER: Iyaku Janarusha
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review with 10 refs. on roles of ***IL*** - ***4*** /IL-13,
IL - ***4*** / ***IL*** - ***13*** ***receptor*** , and
CD40/CD40L in IgE prodn. and inhibitors for IgE prodn. such as
immunosuppressants (CsA and FK506), glucocorticoids, gangliosides,
IPD-1151T (suplatast tosilate), DSCG (disodium cromoglycate), IgE binding
mols., and cytokines.

L5 ANSWER 80 OF 82 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1996:578319 CAPLUS
DOCUMENT NUMBER: 125:325421
TITLE: Modulation of the human IgE response
AUTHOR(S): De Vries, J. E.; Yssel, H.
CORPORATE SOURCE: Human Immunology Dept, DNAX Research Institute
Molecular and Cellular Biology, Palo Alto, CA, 94304,
USA
SOURCE: Eur. Respir. J. (1996), 9(Suppl. 22), 58S-62S
CODEN: ERJOEI; ISSN: 0903-1936
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 35 refs. Studies on the immunol. basis of allergic diseases
have indicated that enhanced prodn. of the cytokines interleukin (
IL)- ***4*** and IL-13 and the reduced prodn. of
interferon-.gamma. (IFN-.gamma.) by allergen-specific T-cells contribute
to enhanced IgE synthesis and the development of allergic disease in
certain individuals. Therefore, inhibition of ***IL*** - ***4***
and IL-13 synthesis or blocking of activities of these cytokines would be
one approach to inhibiting IgE prodn. In the present communication, novel
approaches toward this goal are discussed. It is shown that an ***IL***
- ***4*** mutant protein, in which the tyrosine residue at position 124
is replaced by aspartic acid (***IL*** - ***4*** .Y124D), binds with
high affinity to the ***IL*** - ***4*** receptor, without receptor
activation. ***IL*** - ***4*** .Y124D acts as a potent antagonist
both of ***IL*** - ***4*** and IL-13 activity in vitro, and inhibits
IgG4 and IgE prodn. induced by these cytokines. These data are compatible
with the notion that the ***IL*** - ***4*** and ***IL*** -
13 ***receptors*** are complex receptors, which share a common
component, which is required for signal transduction. In addn., it has
been demonstrated that allergen-specific T-cells, belonging to the
T-helper 2 (Th2) subset can be rendered anergic after incubation with
allergen-derived peptides representing minimal T-cell activation inducing
epitopes. These anergic Th2 cells failed to produce ***IL*** -
4 and IL-13, and failed to proliferate after activation with
allergen and antigen-presenting cells (APC). The anergized T cells also
failed to give B-cells help in IgE synthesis, although they expressed
normal levels of the CD40 ligand (CD40L). Exogenous ***IL*** -
4 or IL-13 failed to restore IgE synthesis, indicating that in
addn. to CD40L other co-stimulatory signals are required for productive
T-cell/B-cell interactions, resulting in IgE synthesis. IgE prodn. was
restored by exogenous IL-2, demonstrating that IL-2 reverses the
nonresponsive state and helper function of these nonresponsive T-cells.
It is tempting to speculate that induction of T-cell nonresponsiveness by
allergen-derived peptides may represent the underlying mechanisms for
successful immunotherapy in allergenic patients.

L5 ANSWER 81 OF 82 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 97302046 EMBASE
DOCUMENT NUMBER: 1997302046
TITLE: A murine interleukin-4 mutant protein (QY) acts as a highly
efficient ***IL*** - ***4*** and ***IL*** - ***13*** ***receptor*** antagonist.
AUTHOR: Grunewald S.; Werthmann A.; Schnarr B.; Sebald W.; Duschl A.
CORPORATE SOURCE: S. Grunewald, Biozentrum, Physiological Chemistry II, University of Wurzburg, Wurzburg, Germany
SOURCE: Immunobiology, (1997) 197/2-4 (203).
Refs: 1
ISSN: 0171-2985 CODEN: ZIMMDO
COUNTRY: Germany
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 026 Immunology, Serology and Transplantation
029 Clinical Biochemistry
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English

L5 ANSWER 82 OF 82 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 95000814 EMBASE
DOCUMENT NUMBER: 1995000814
TITLE: Interleukin 4.
AUTHOR: Banchereau J.
CORPORATE SOURCE: Schering-Plough, Lab for Immunological Research, 27 Chemin des Peupliers,69572 Dardilly, France
SOURCE: FORUM - Trends in Experimental and Clinical Medicine, (1994) 4/5 (514-531).
ISSN: 1121-8142 CODEN: FTCME2
COUNTRY: Italy
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 016 Cancer
026 Immunology, Serology and Transplantation
030 Pharmacology
037 Drug Literature Index
038 Adverse Reactions Titles
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Human interleukin 4 (***IL*** - ***4***), a mature 129 amino acid
(AA) glycoprotein secreted by activated T cells and basophils, is a
pleiotropic cytokine that affects T and B lymphocytes, monocytes,
dendritic cells, polymorphonuclear cells, fibroblasts, endothelial cells
and hepatocytes. It may display contrasting biological effects according
to the differentiation stage of a given cell and to the cytokine
environment. ***IL*** - ***4*** is a growth factor for activated T
and B cells, and both in vivo and in vitro studies have shown the crucial
role of ***IL*** - ***4*** in the induction of immunoglobulin E
production. ***IL*** - ***4*** 's ability in inducing naive T helper
cells to differentiate into ***IL*** - ***4*** secreting Th2 cells
is critical. ***IL*** - ***4*** inhibits, in vitro and in vivo, the
secretion of proinflammatory cytokines by monocytes/macrophages and
polymorphonuclears. Human ***IL*** - ***4*** binds to a high
affinity receptor which is composed of at least a 130-kD glycoprotein of
800 AA and a .gamma. chain common to the IL-2, IL-7 and ***IL*** -
13 ***receptors*** . ***IL*** - ***4*** may prove useful
as an antitumoural and anti-inflammatory agent.